

Figure 1a Prior Art Cone Design

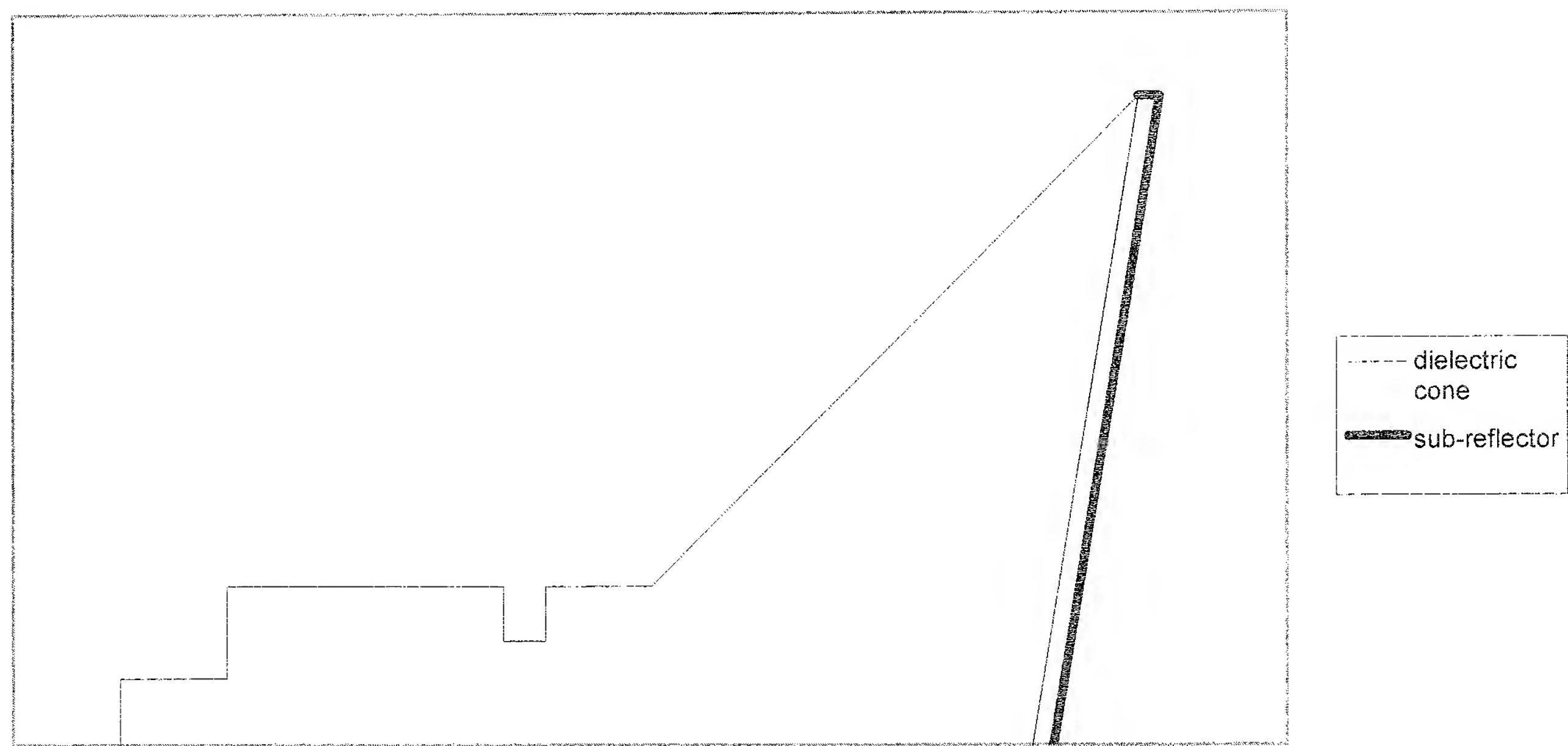
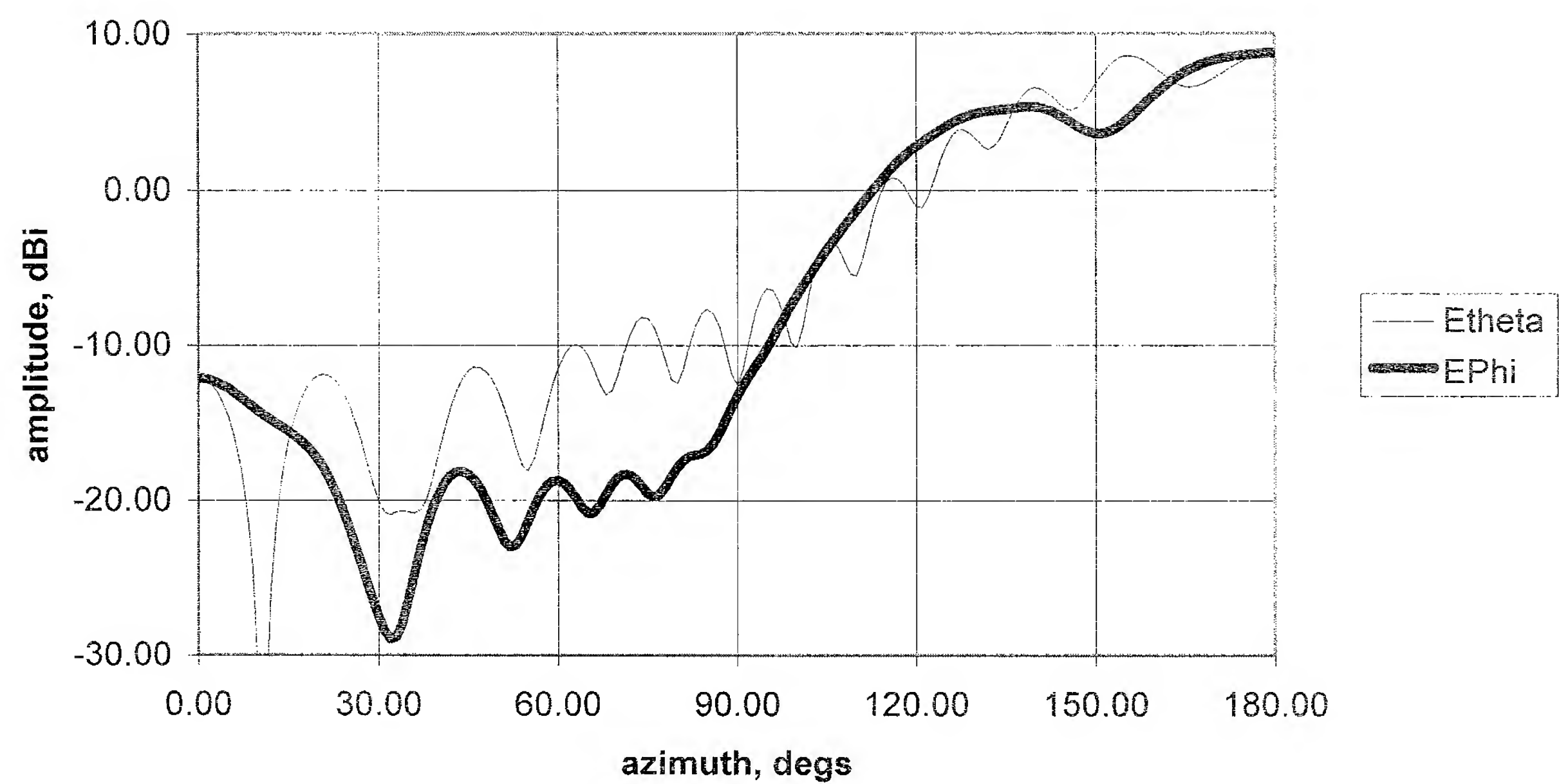


Figure 1b: Etheta and EPhi Amplitude Radiation Patterns from Prior Art Cone Feed (F/D=0.37 typ)



**Figure 1c: Etheta and Ephi Phase Patterns from Prior Art Cone Feed  
(F/D=0.37 typ)**

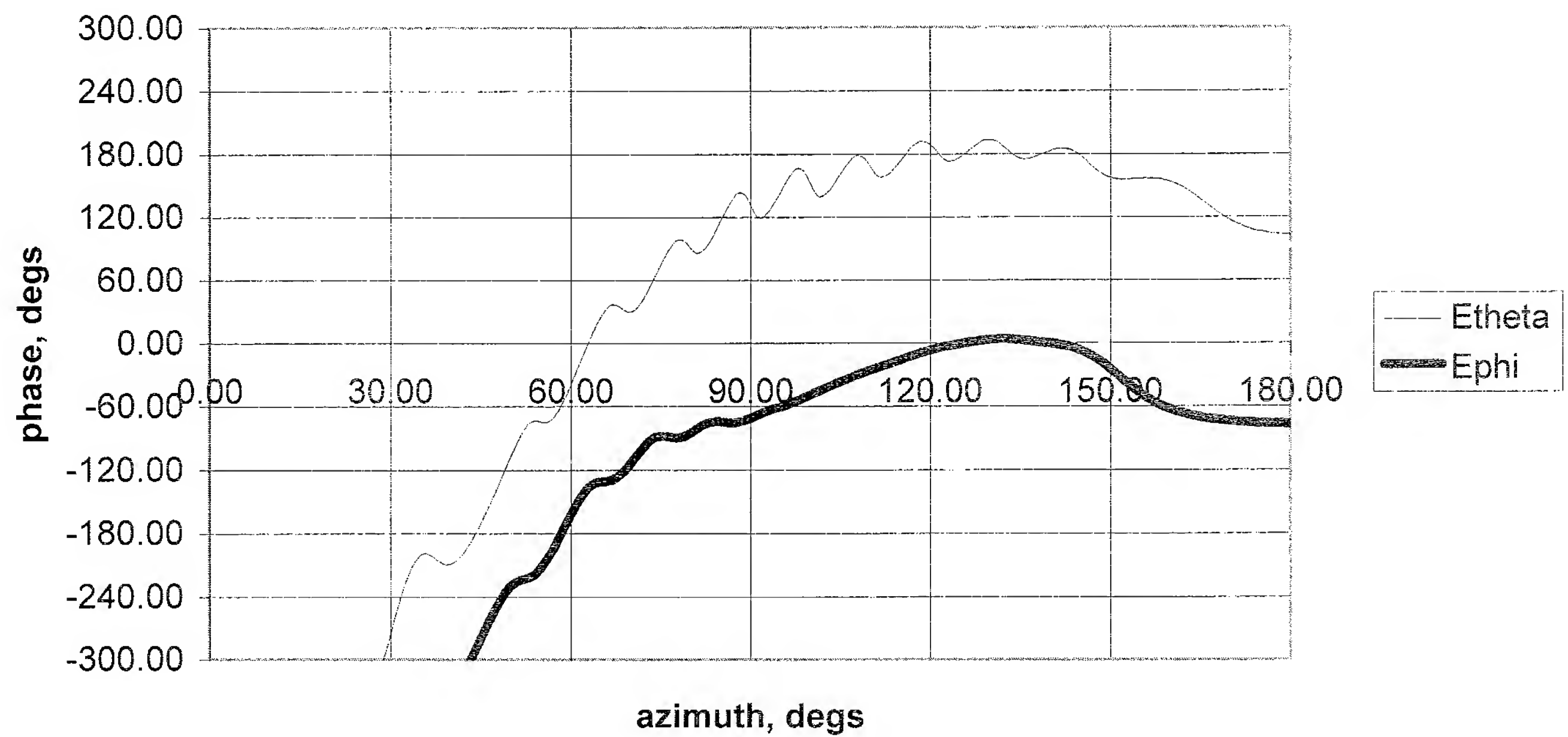


Figure 2a: Prior Art Cone Design (F/D<0.2) typ.

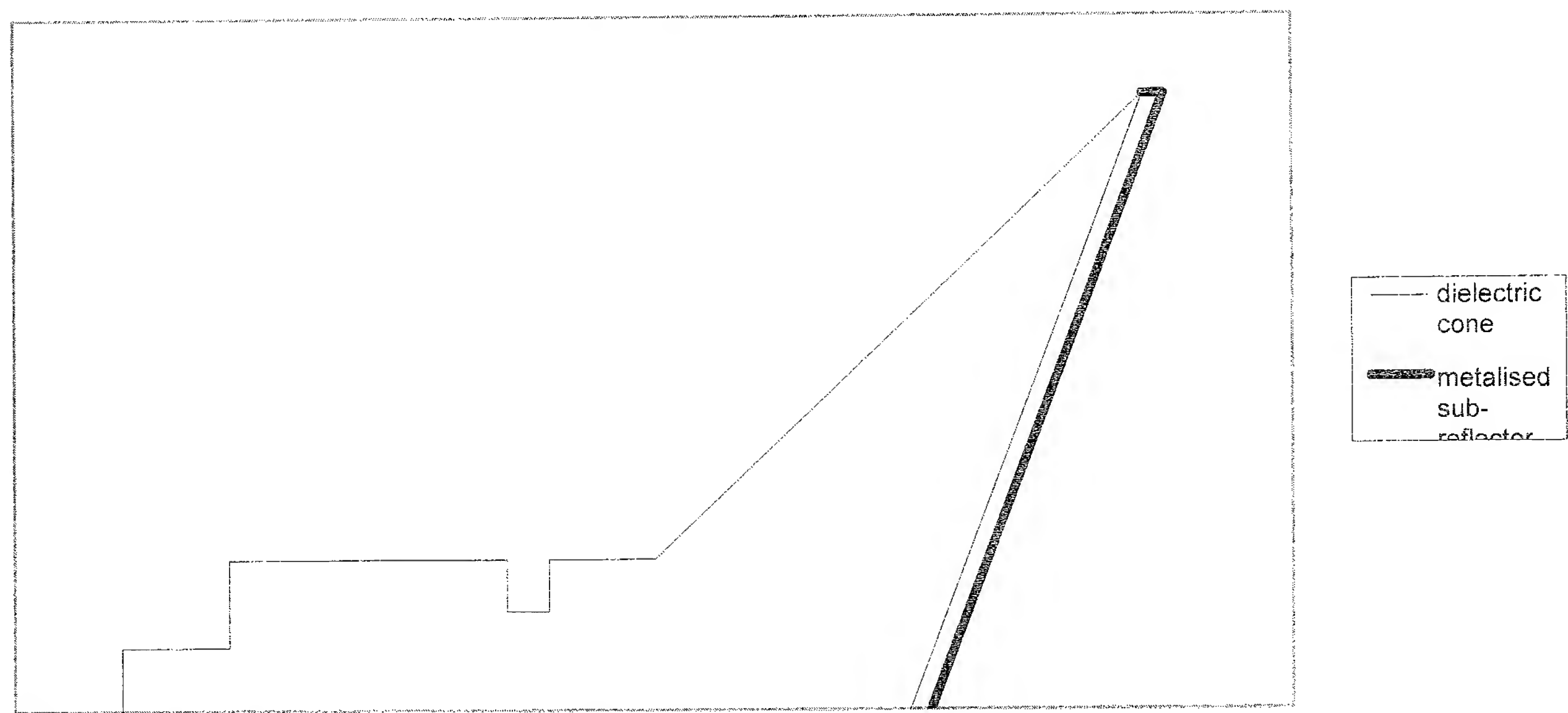


Figure 2b: Etheta and EPhi Amplitude Radiation Patterns from Prior Art Cone Feed (F/D< 0.2 typ)

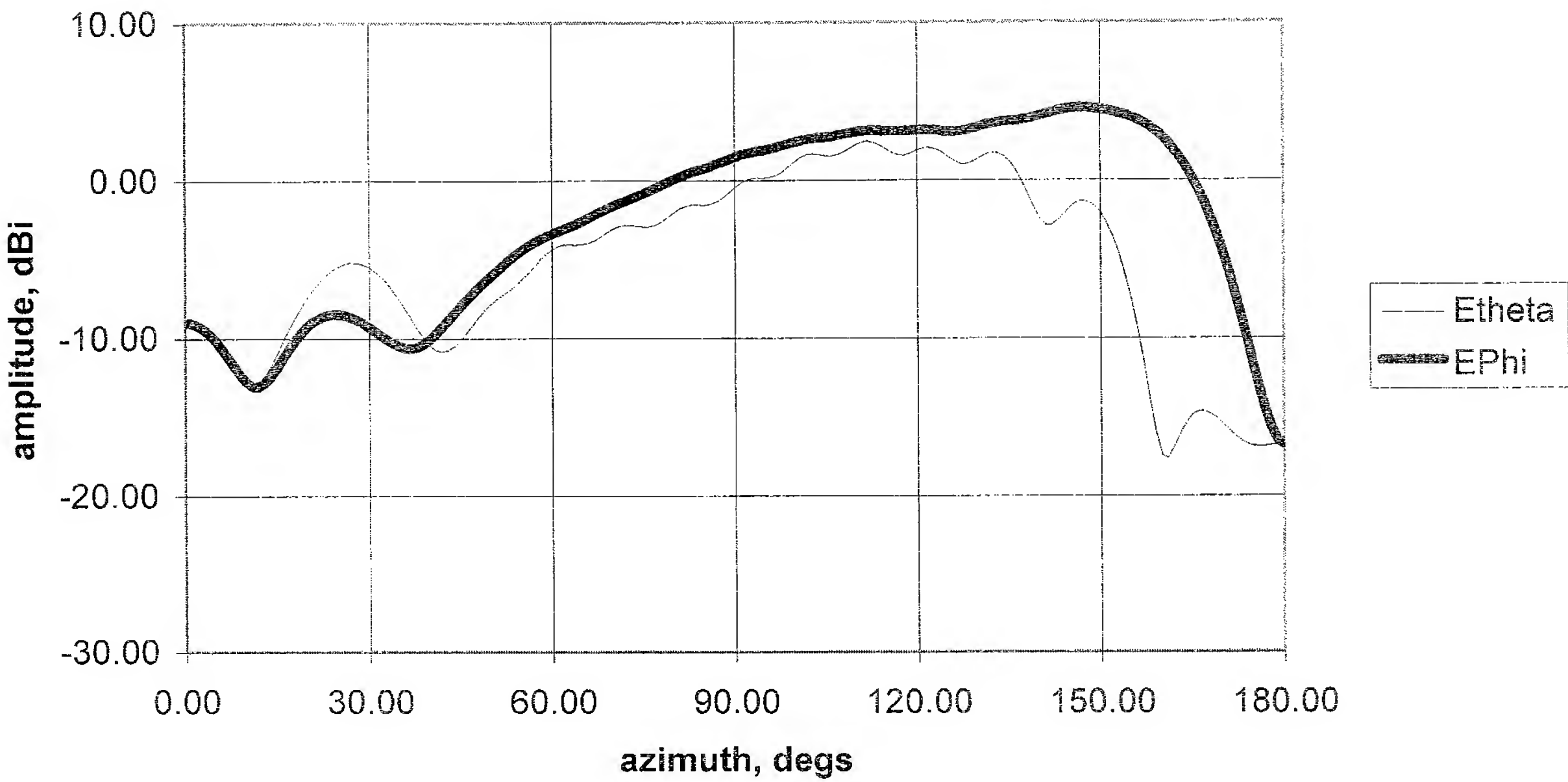


Figure 2c: Etheta and Ephi Phase Patterns from Prior Art Cone Feed (F/D<0.2 typ)

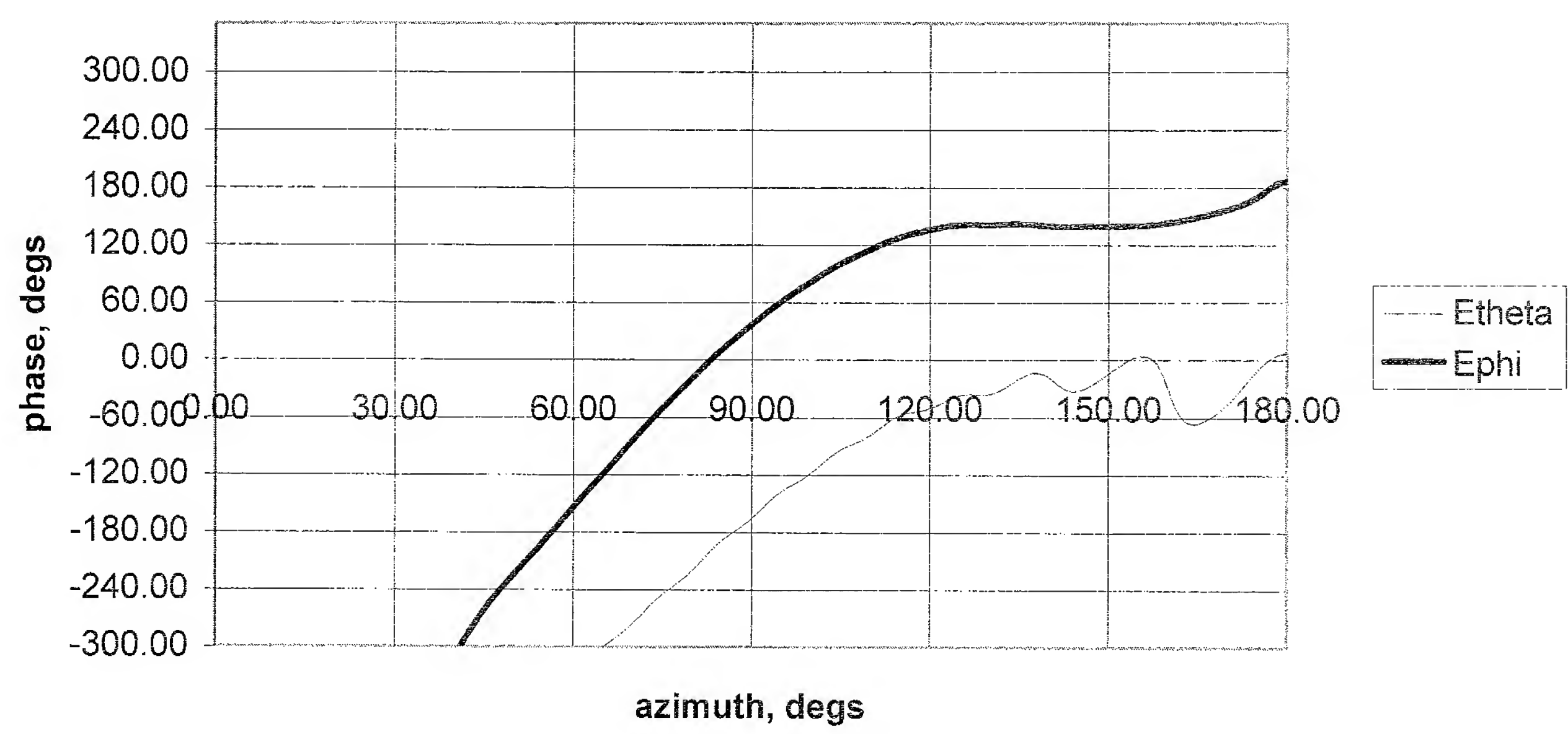


Figure 3a: Prior Art Corrugated Cone Design (F/D<0.2) typ.

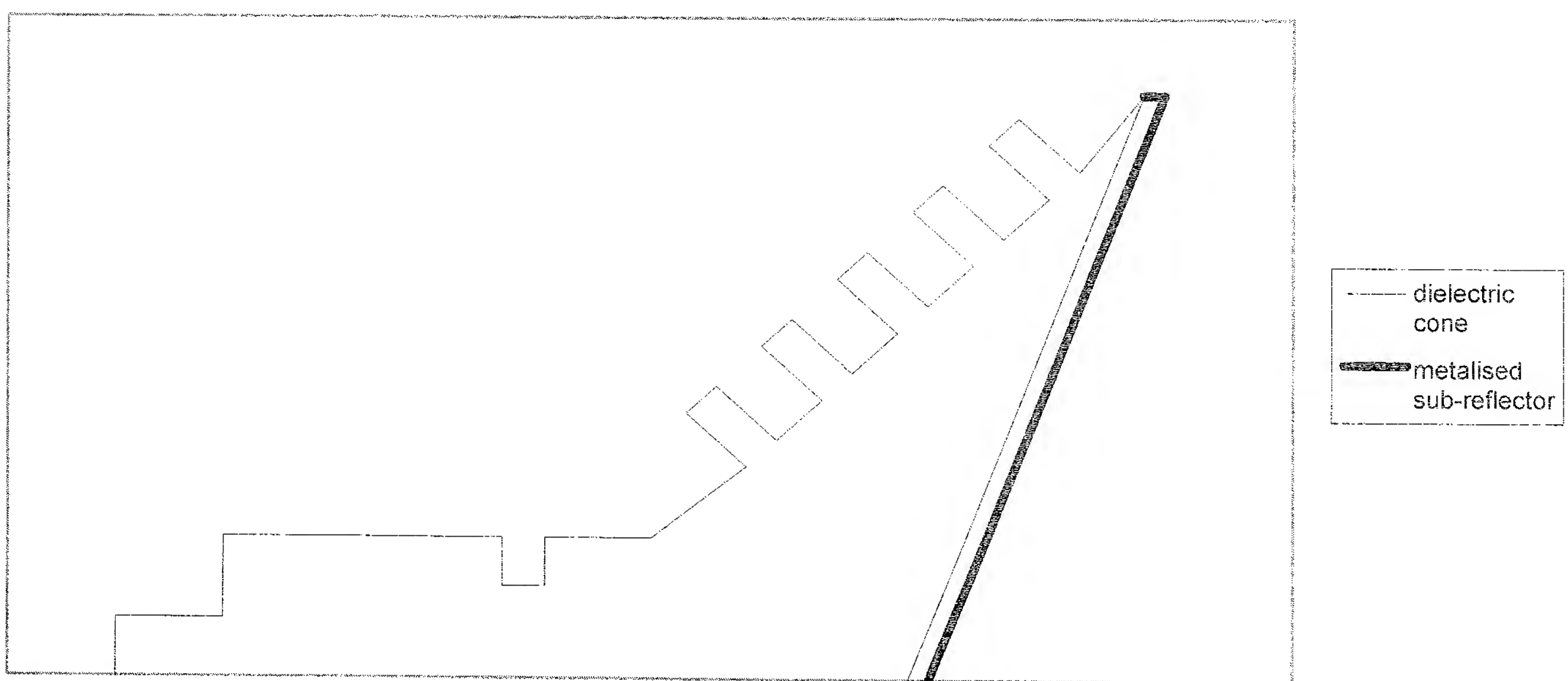


Figure 3b: Etheta and EPhi Amplitude Radiation Patterns from Prior Art Corrugated Cone Feed (F/D< 0.2 typ)

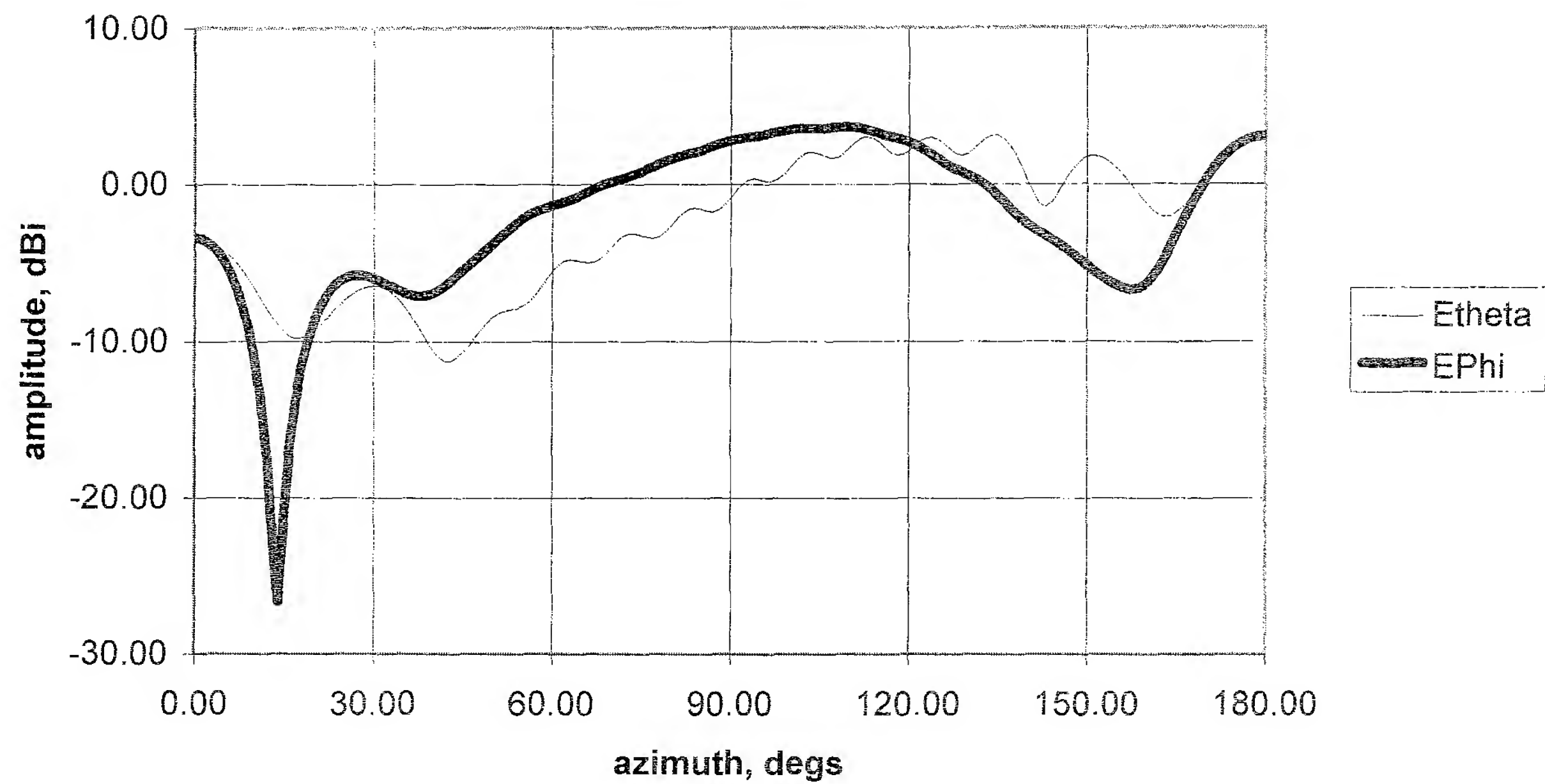
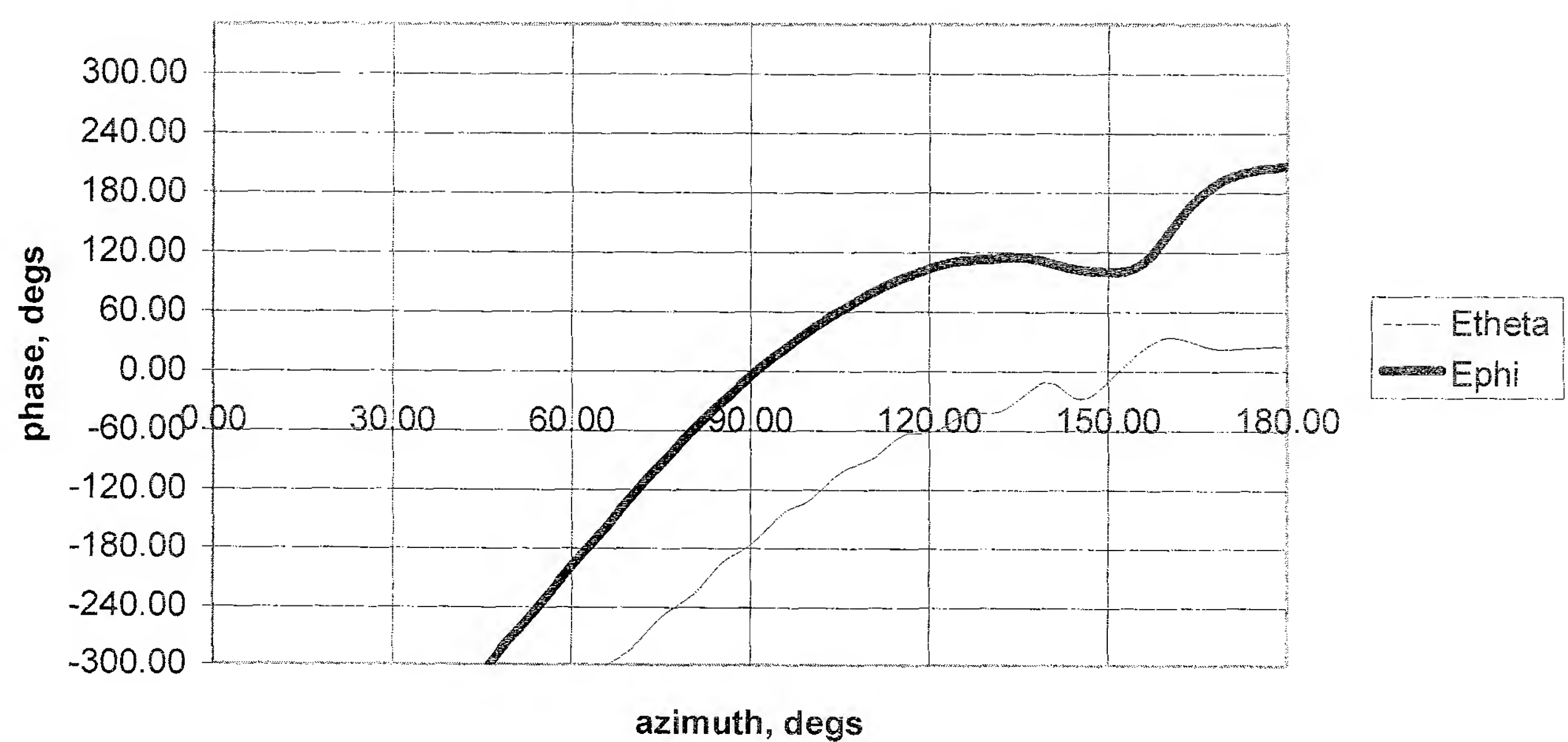
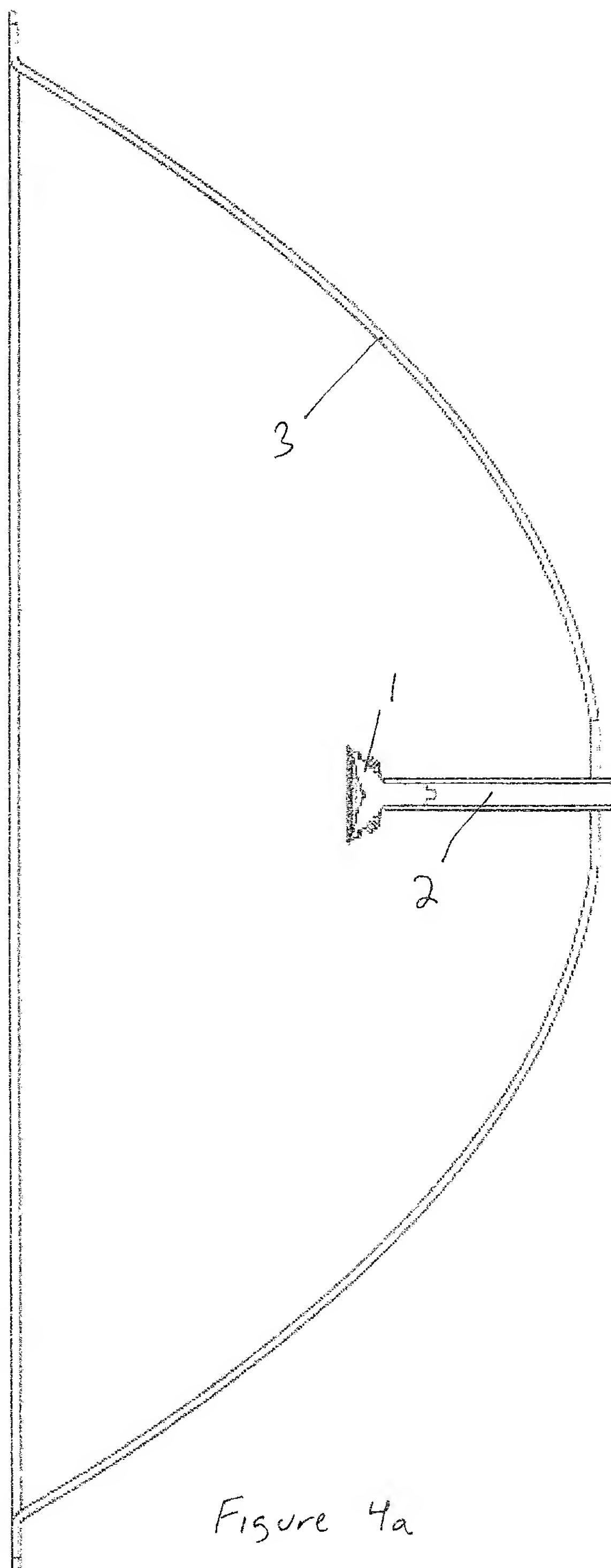


Figure 3c: Etheta and EPhi Phase Patterns from Prior Art Corrugated Cone Feed (F/D<0.2 typ)





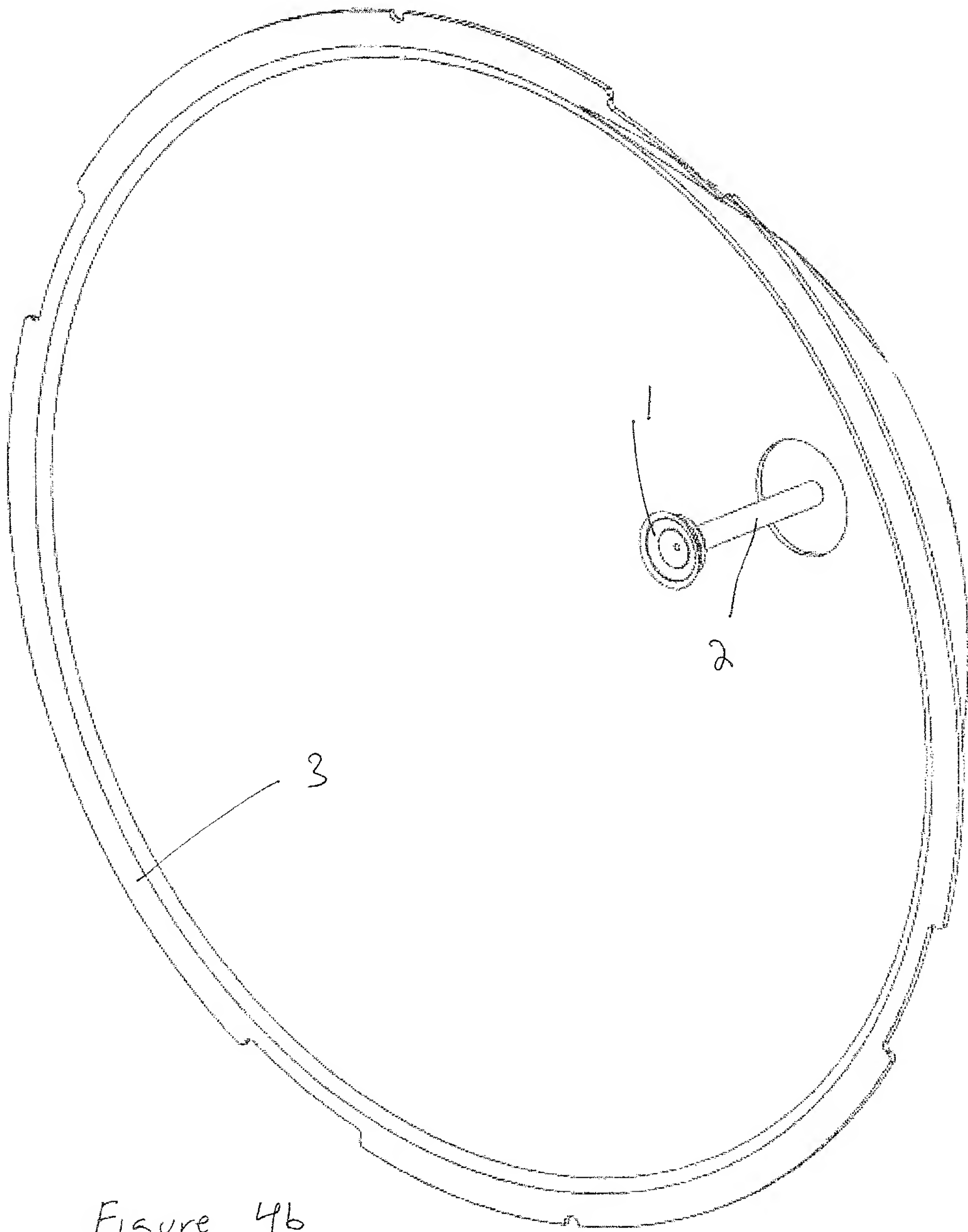


Figure 4b

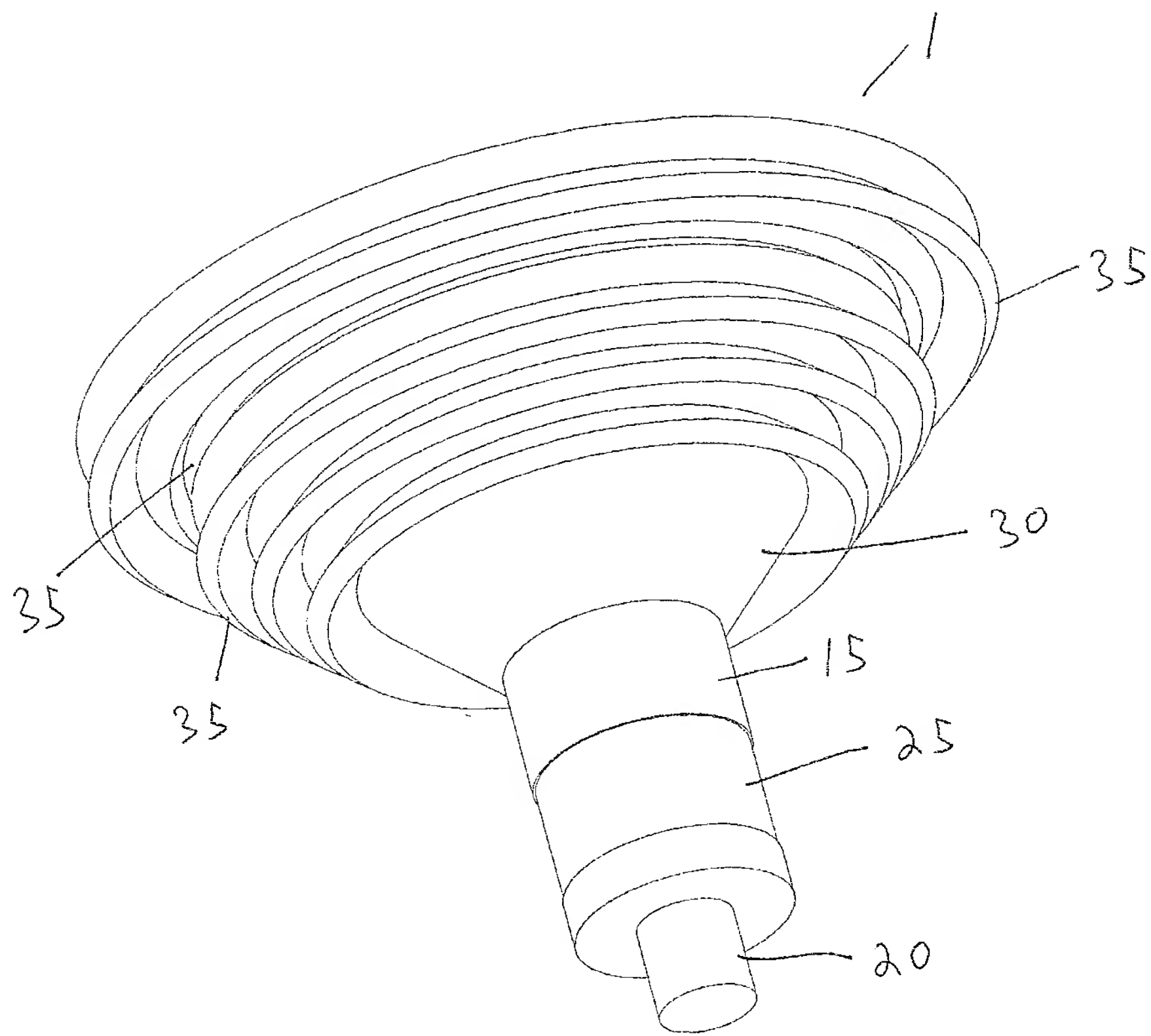


Figure 5a





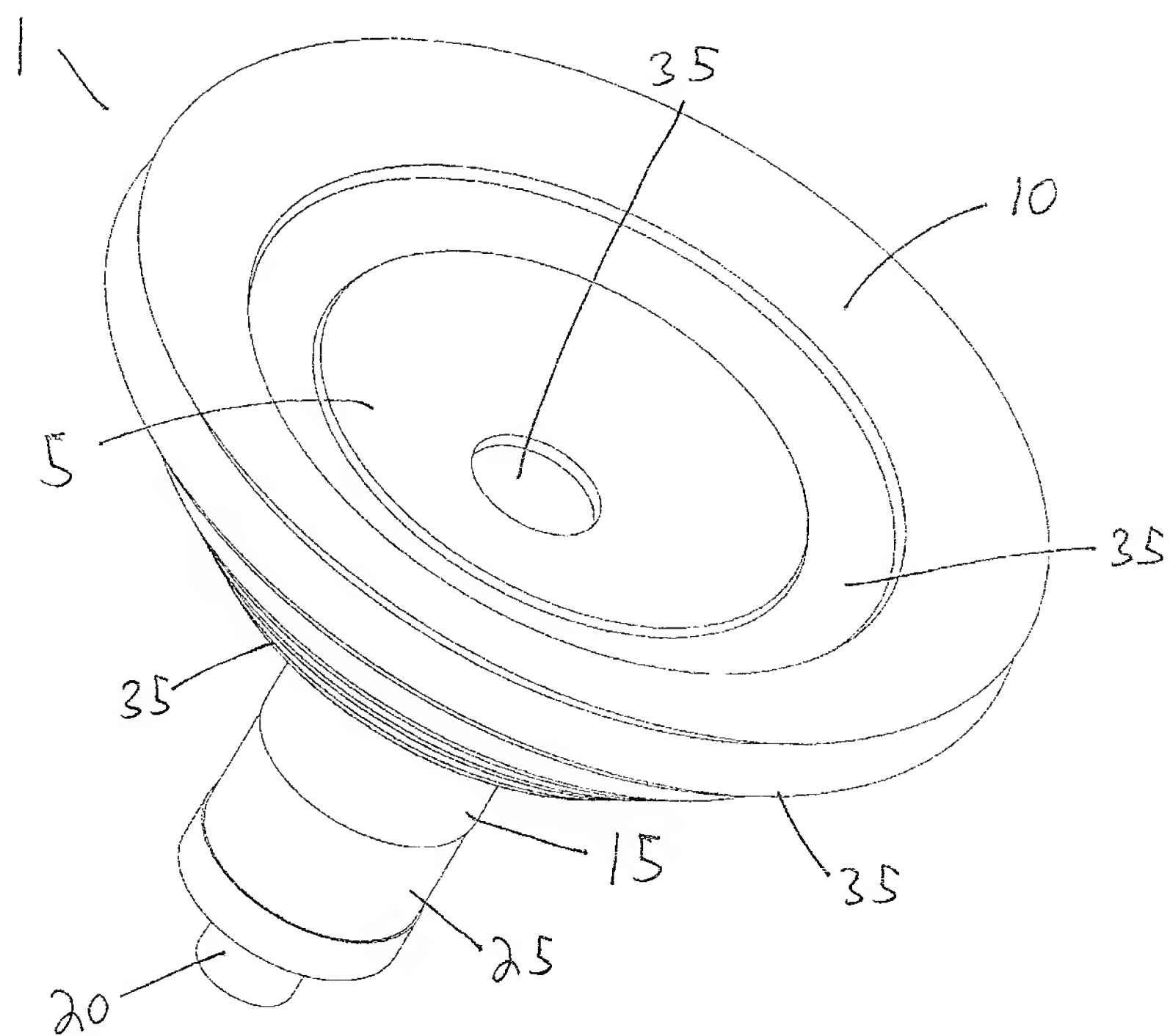


Figure 5b



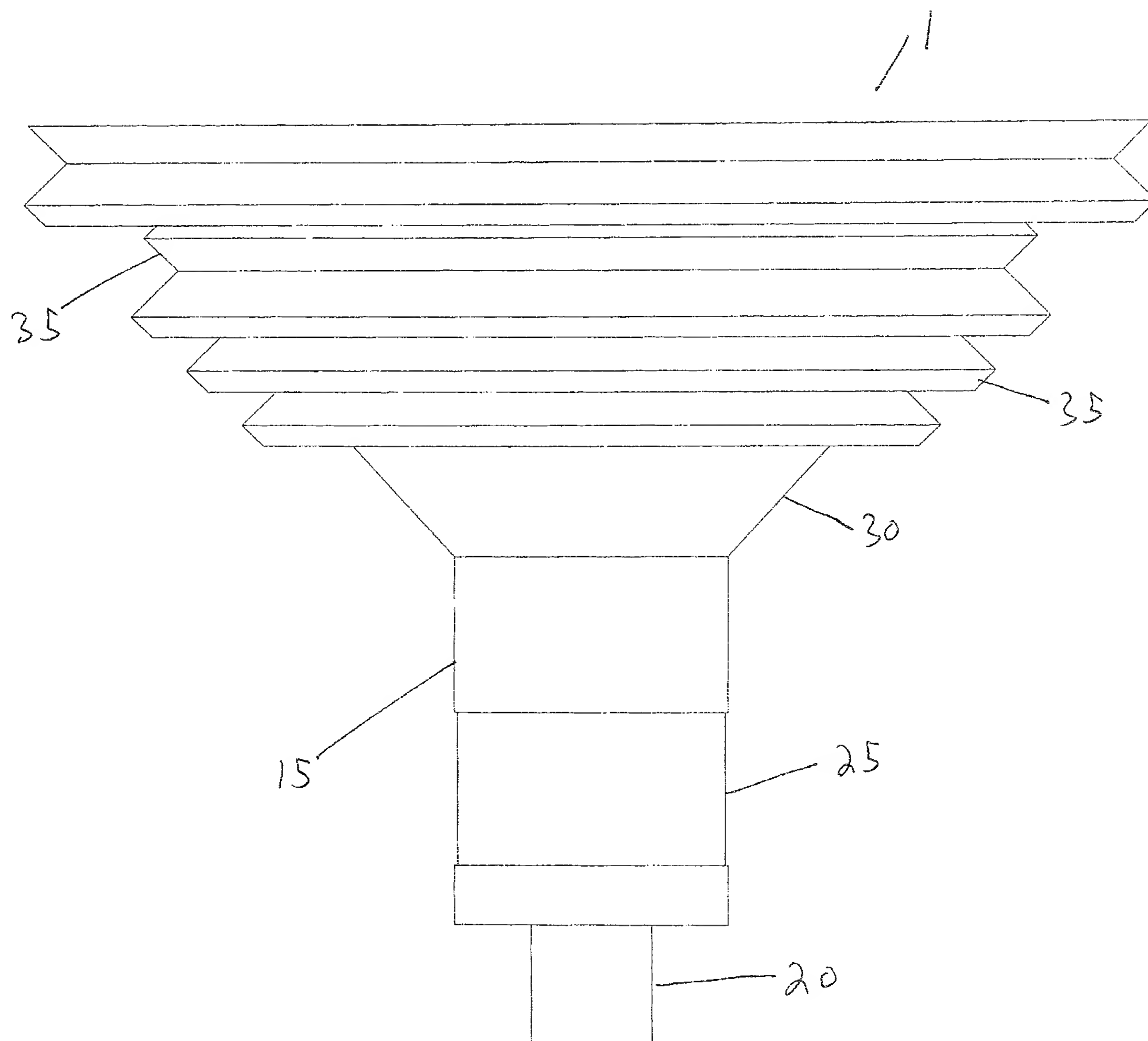


Figure 5c



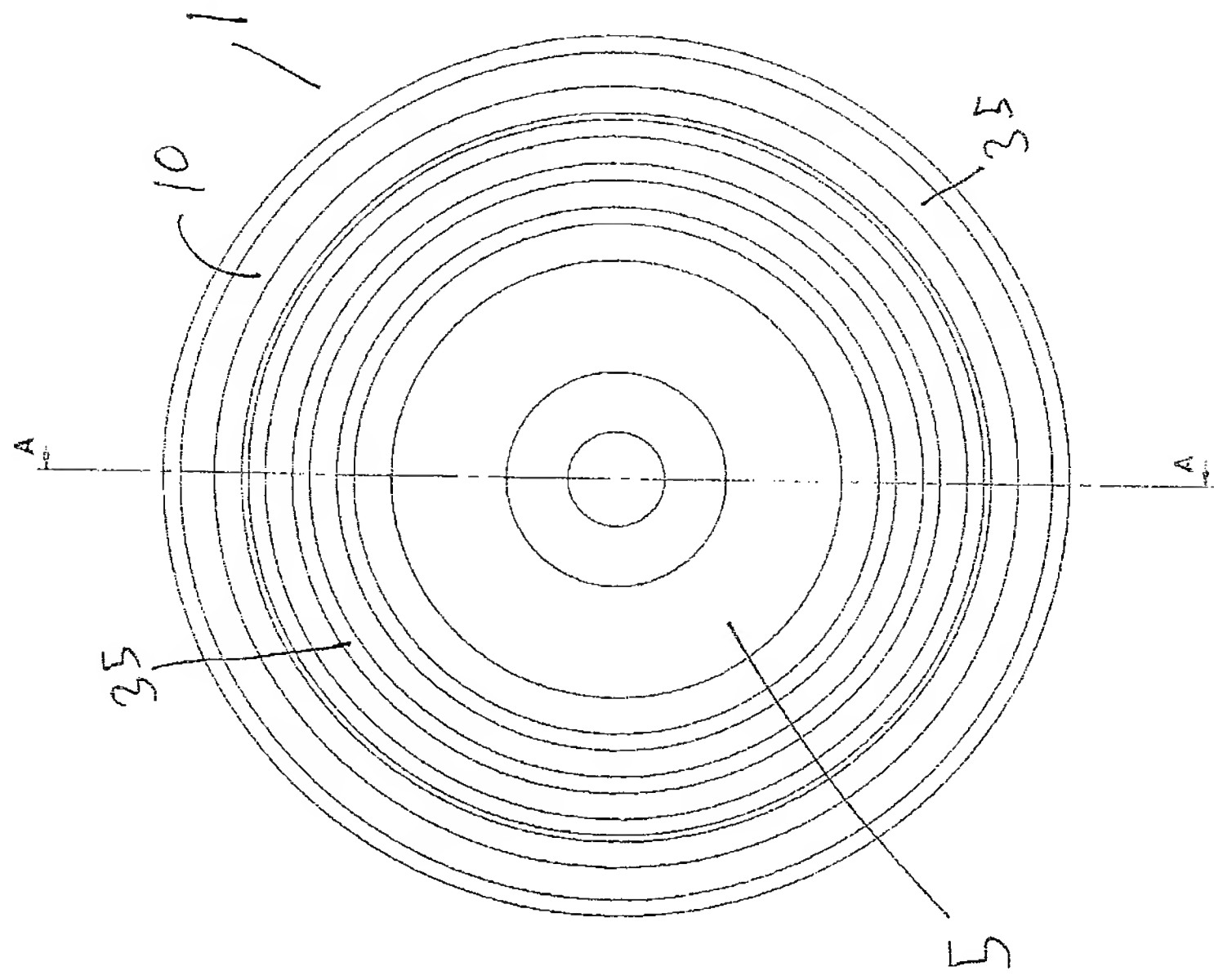


Figure Sd

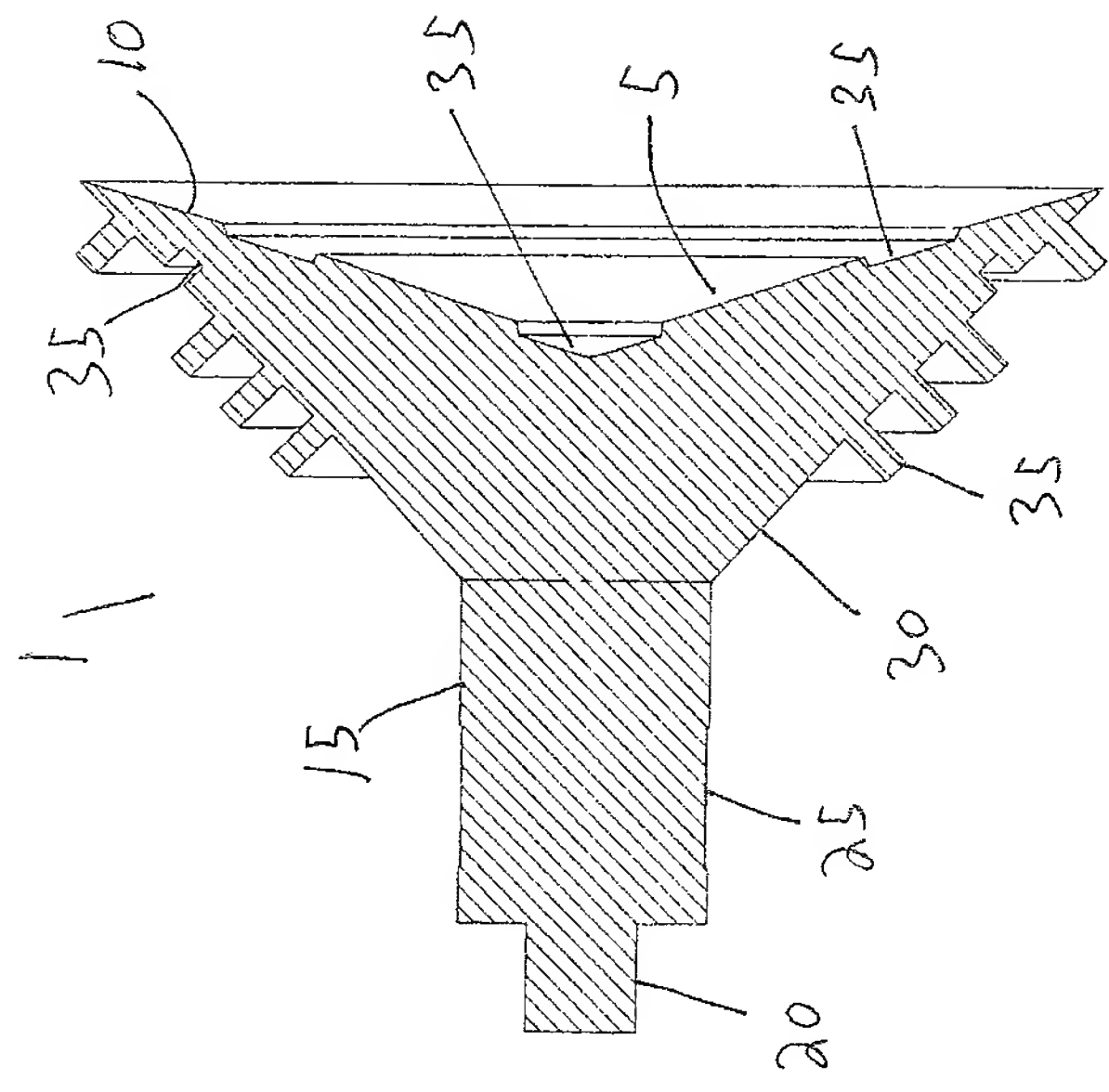
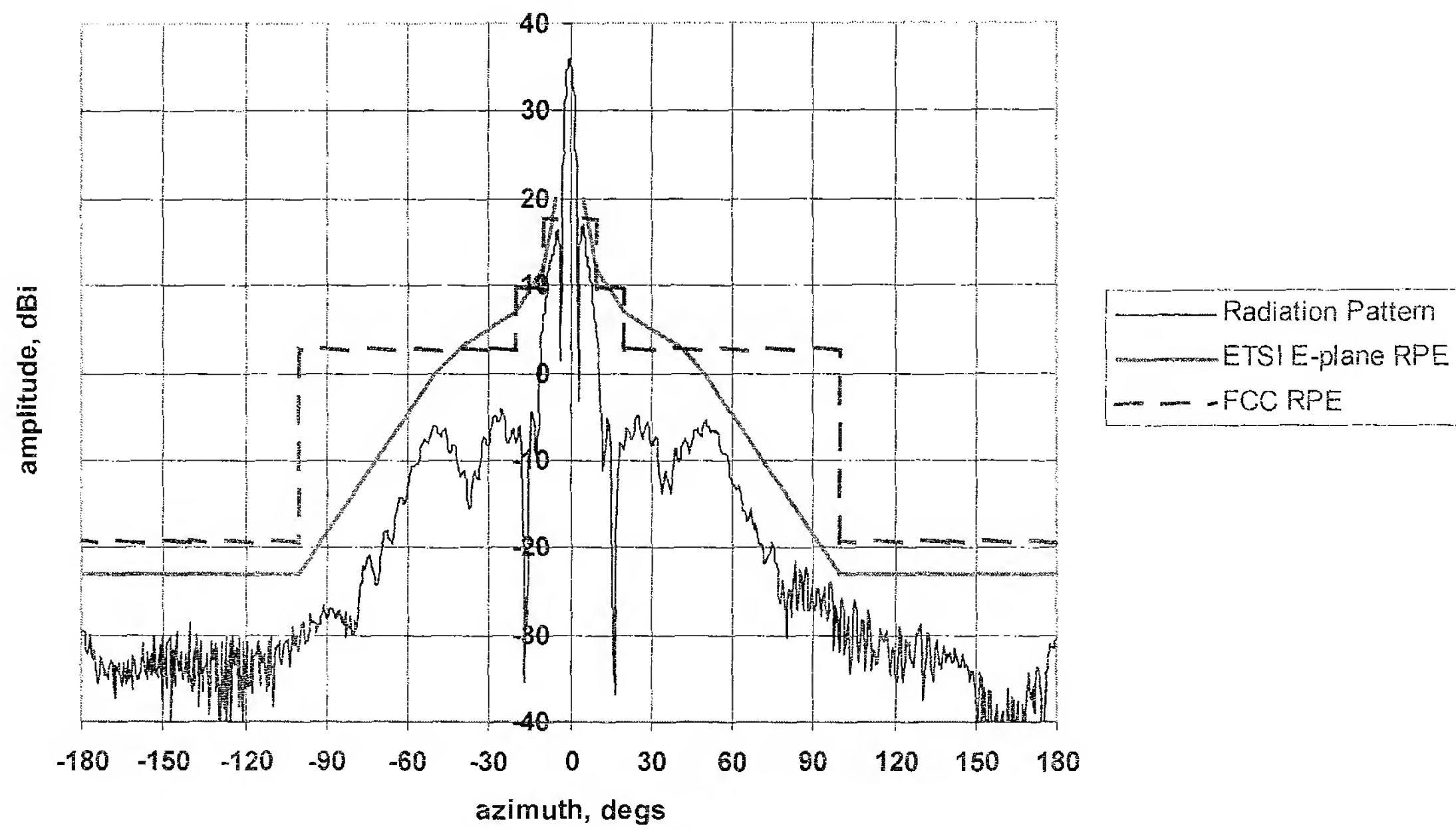


Figure 5e

**Figure 6a: 22GHz 1' Measured Radiation Pattern of First Embodiment: E-plane vs ETSI and FCC specs**



**Figure 6b: 22GHz 1' Measured Radiation Pattern of First Embodiment: H-plane vs ETSI and FCC specs**

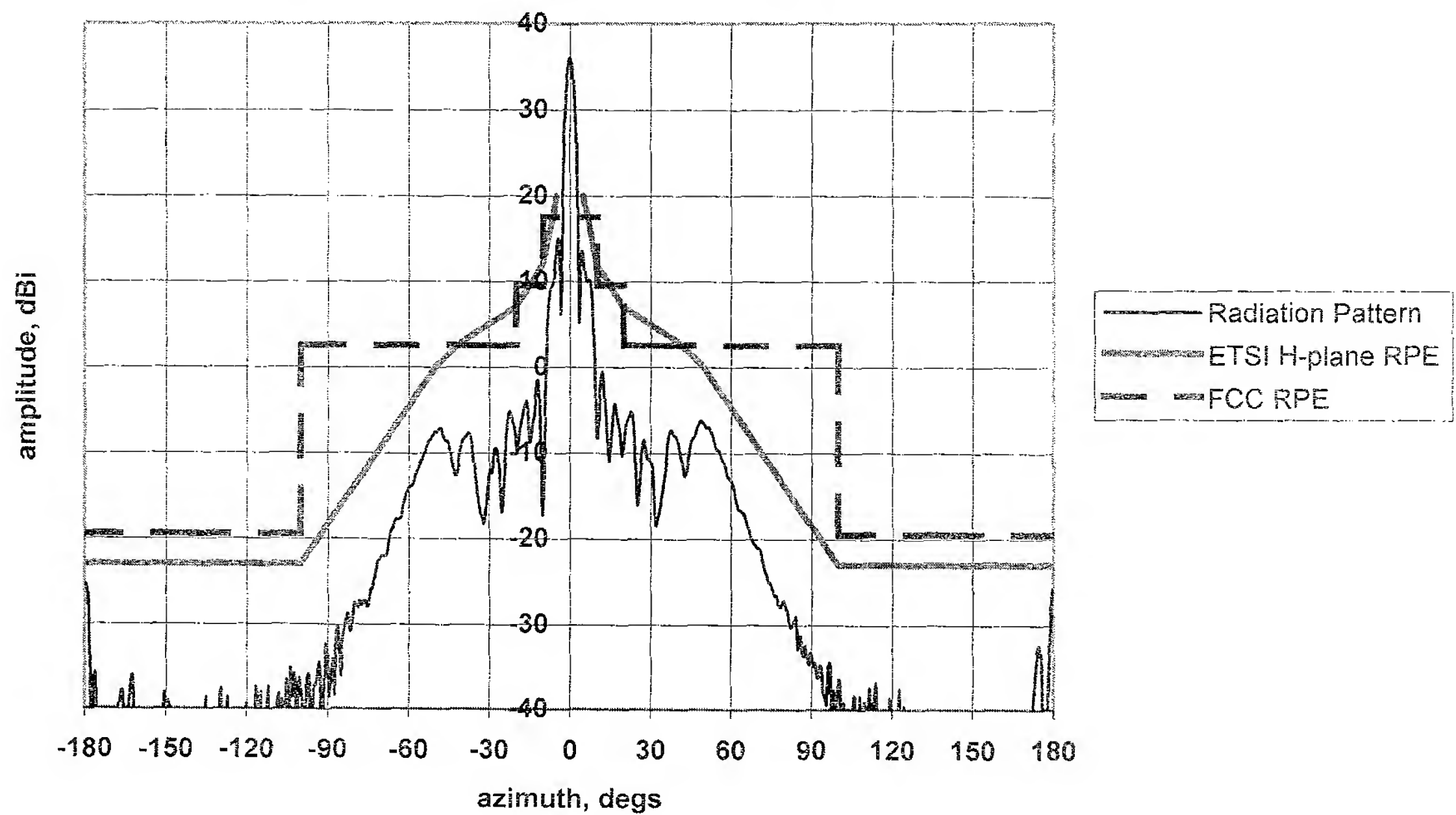
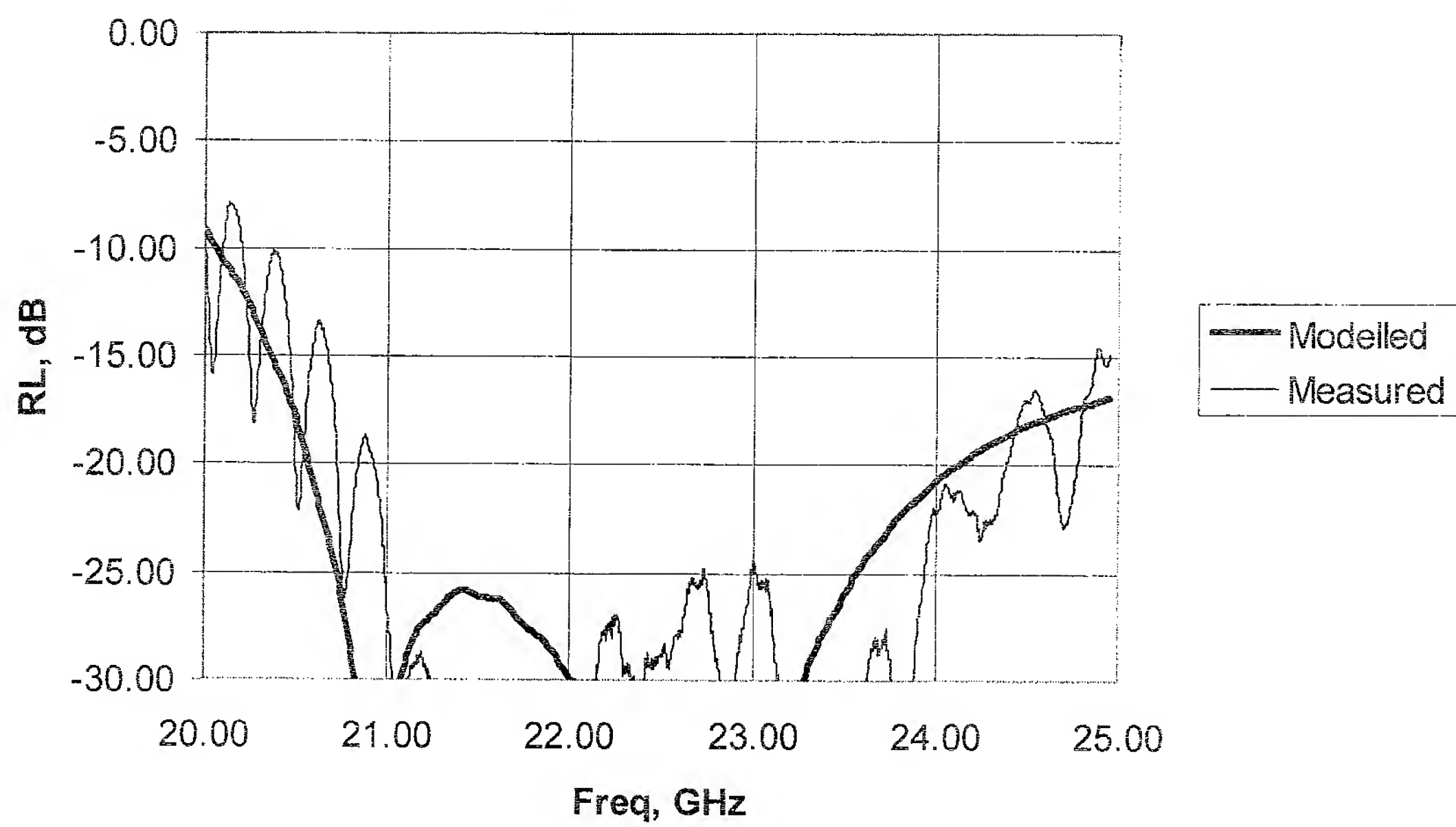


Figure 7 of First Embodiment: Measured vs Modelled  
Return Loss of Cone Feed



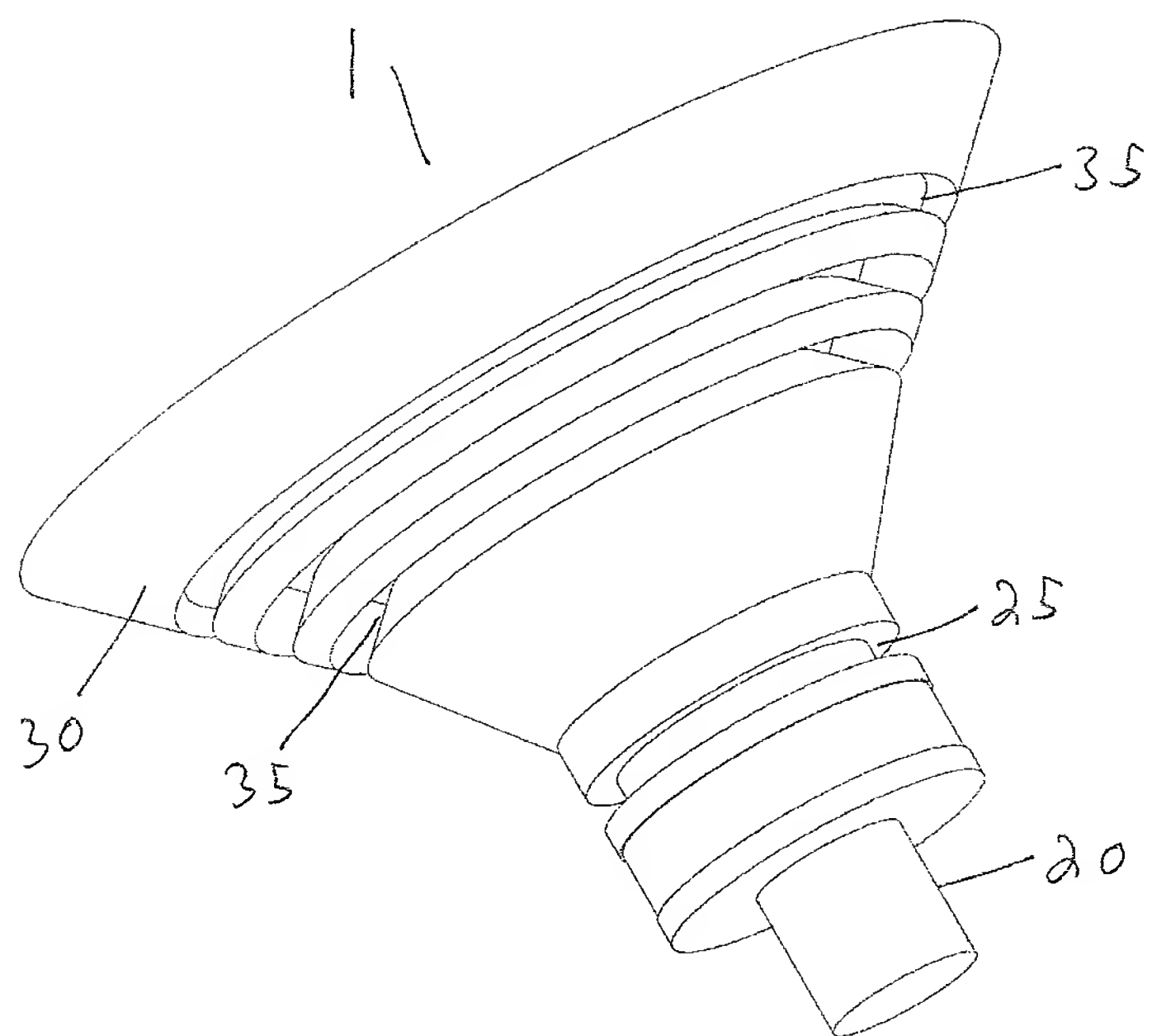


Figure 8a

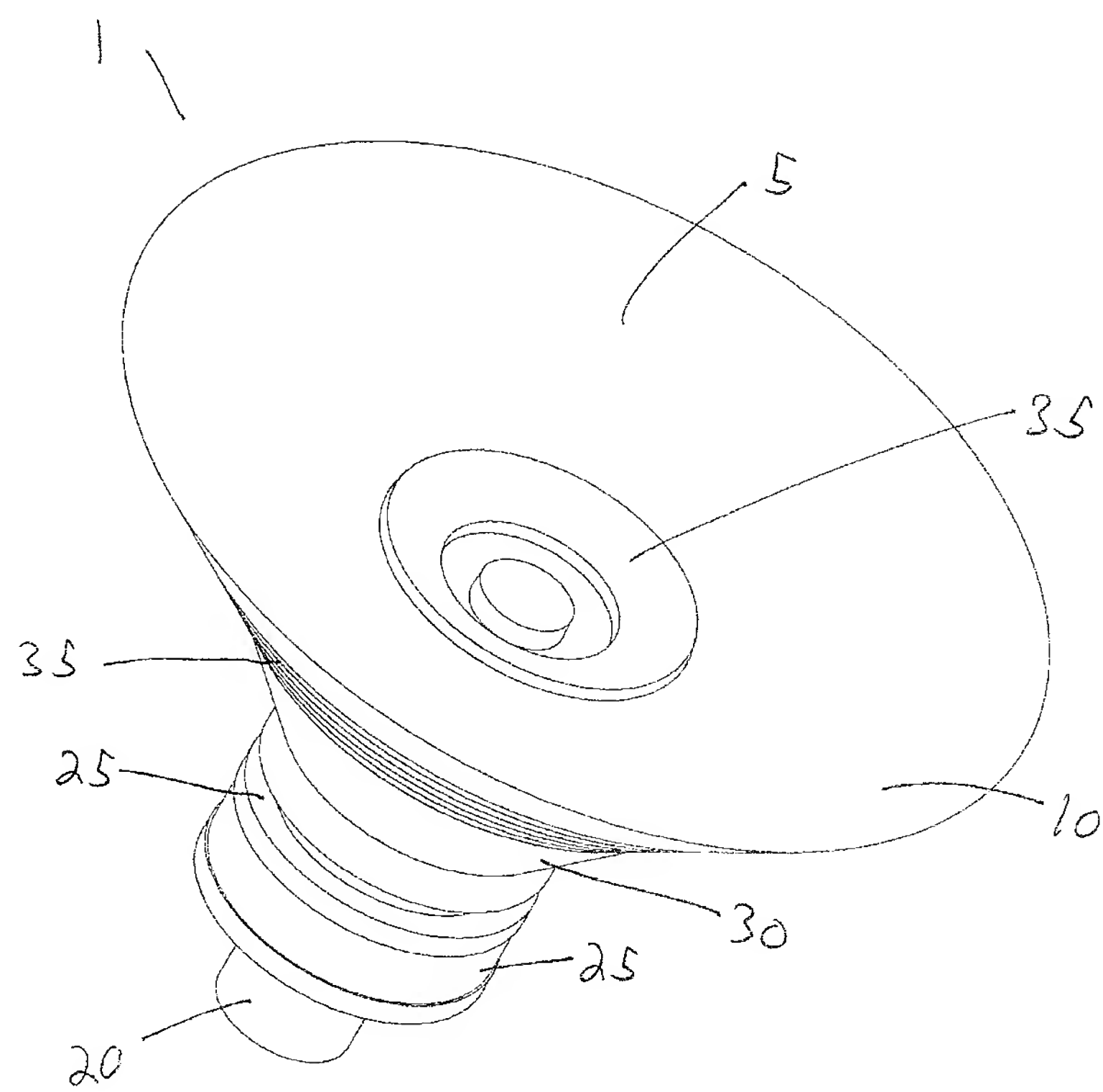


Figure 8b



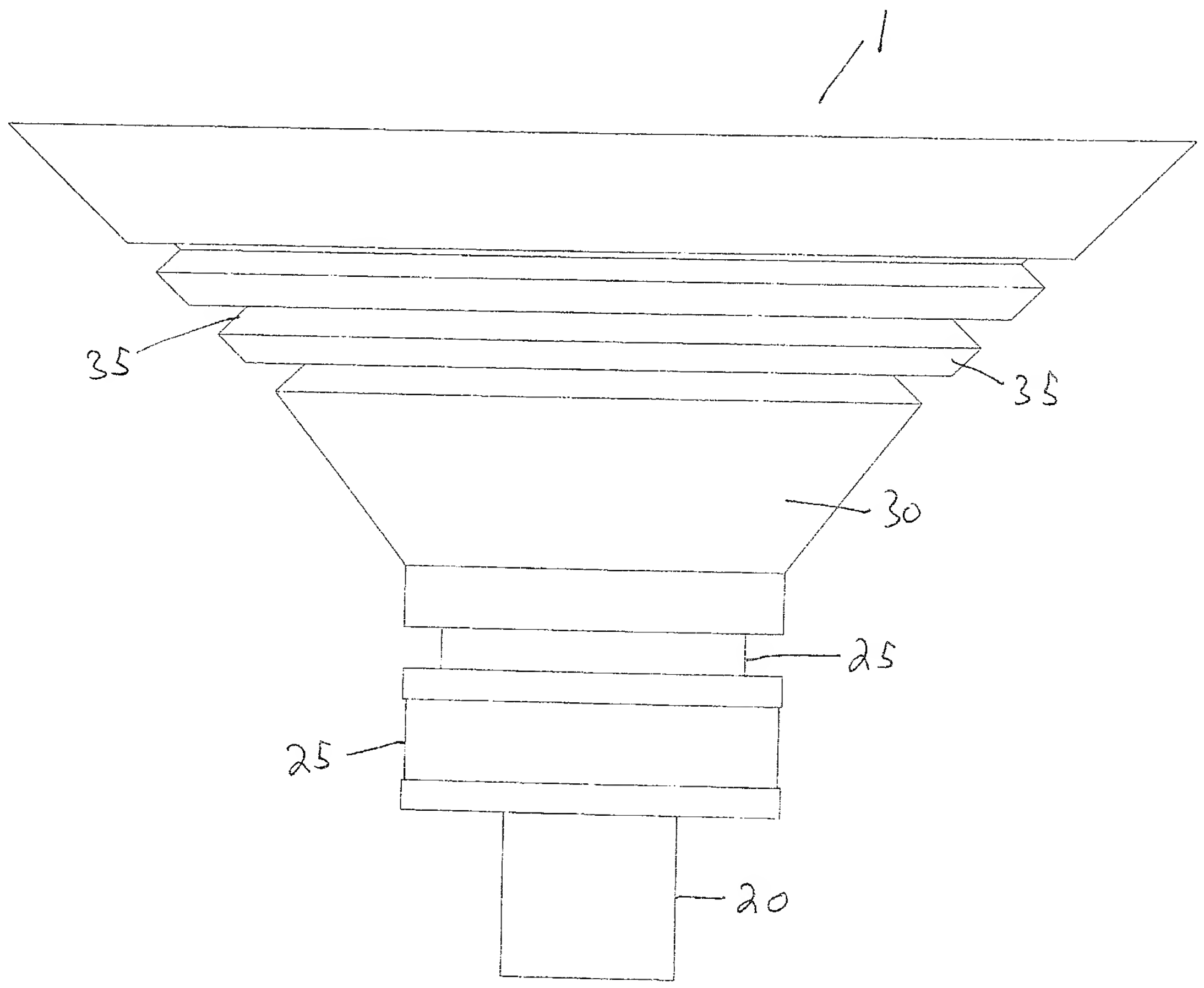


Figure 8c





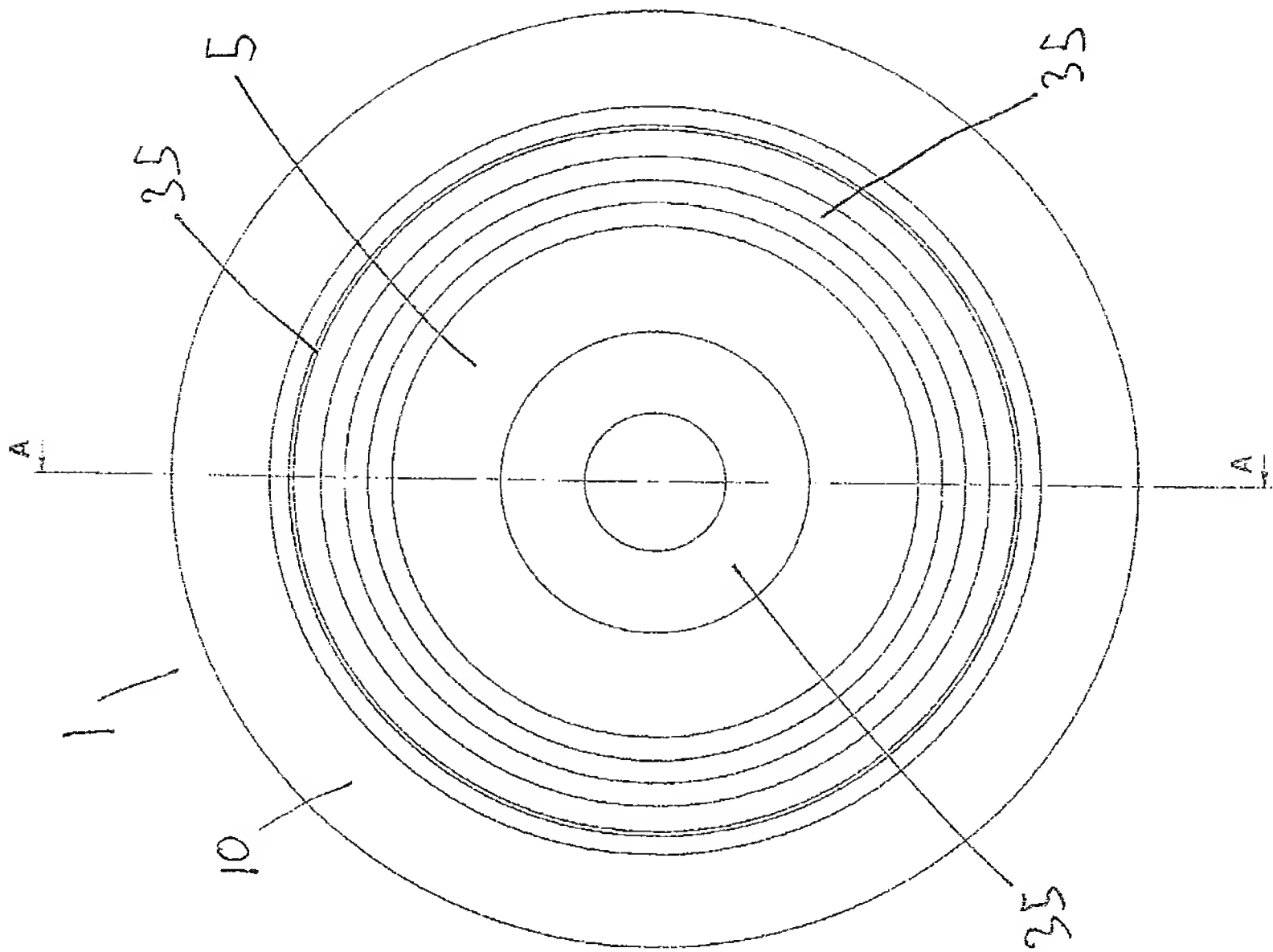


Figure 8d

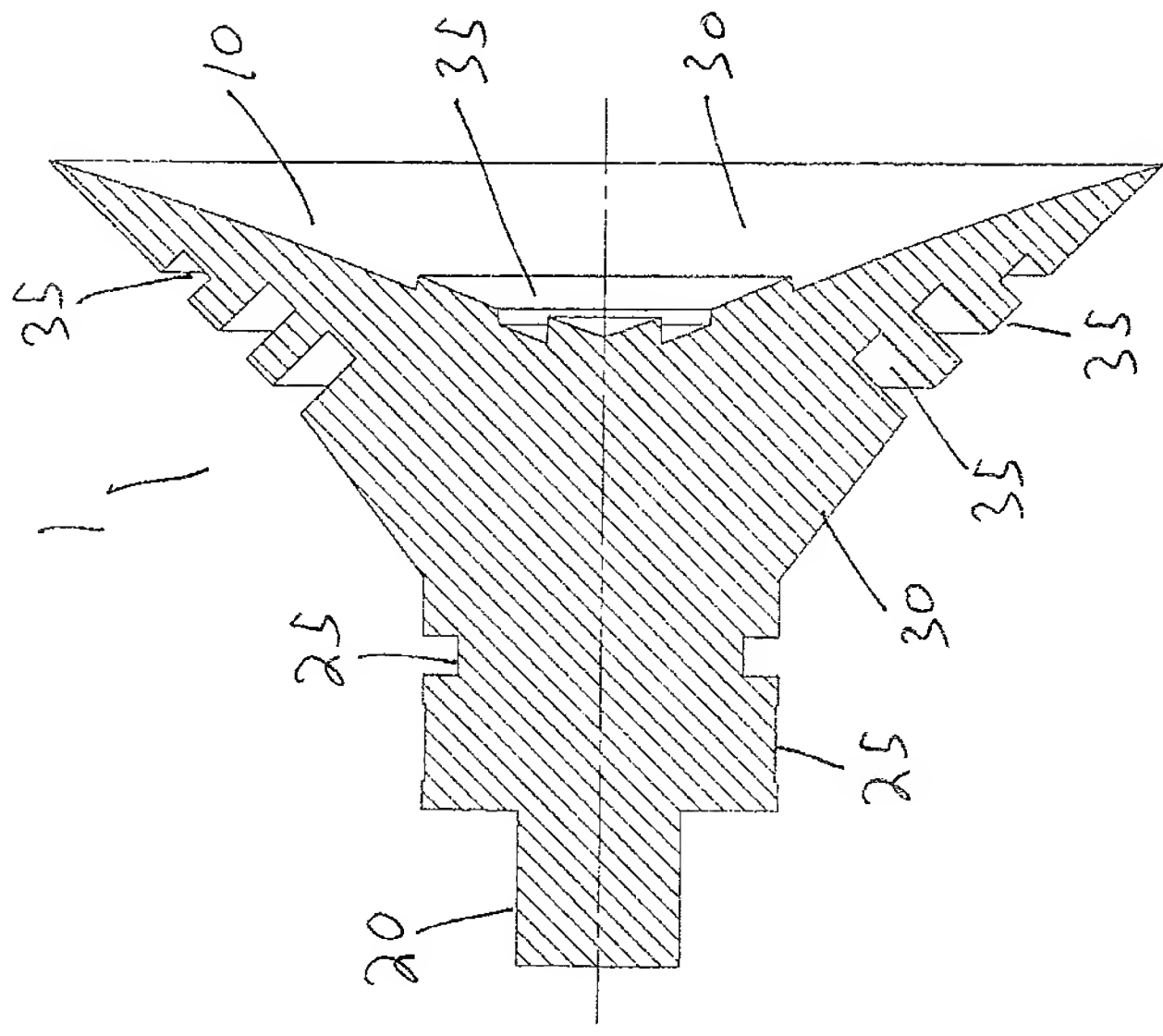


Figure 8e

Figure 9a: 22GHz 1' Measured Radiation Pattern of Second Embodiment: E-plane vs ETSI and FCC specs

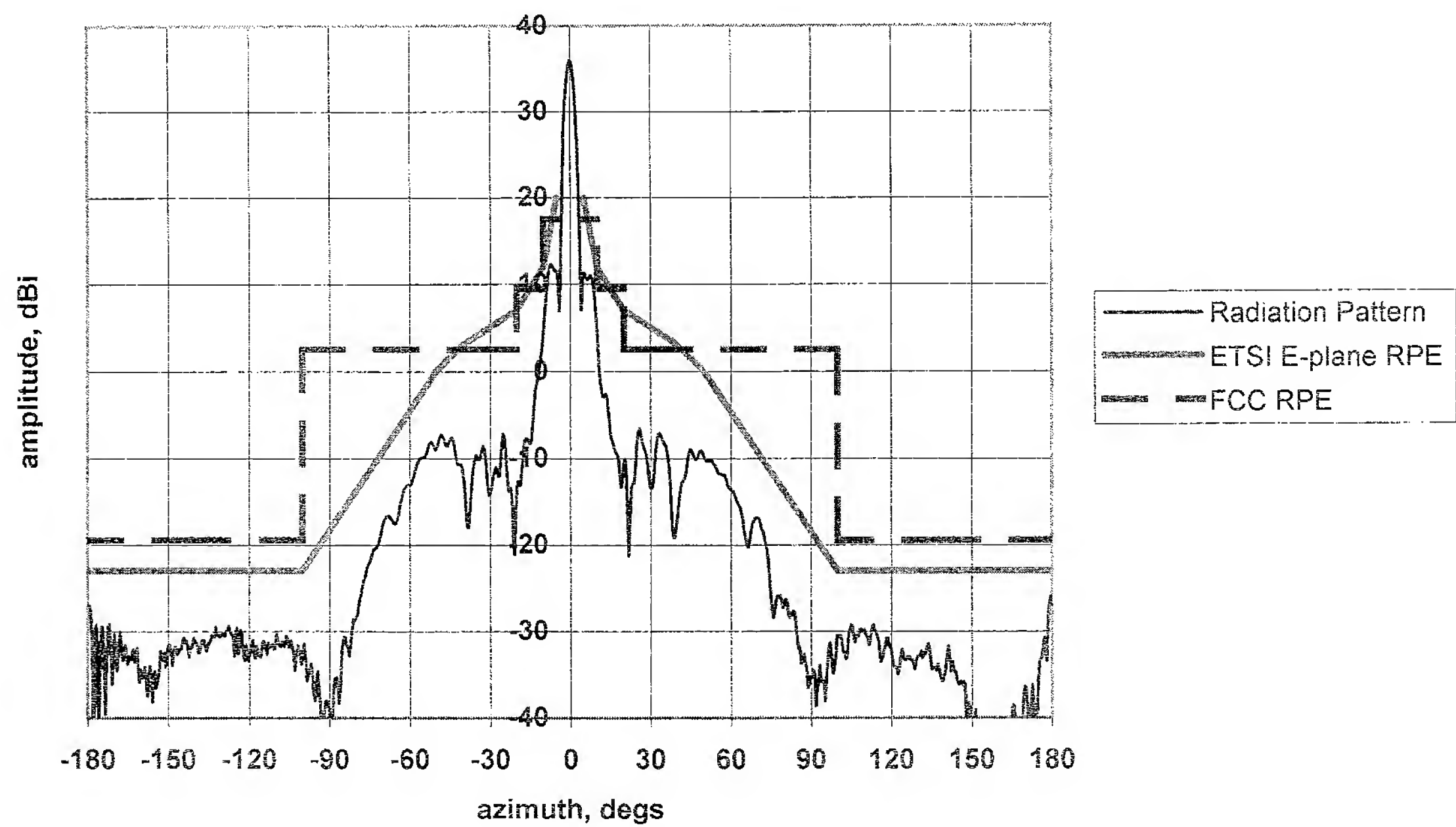


Figure 9b: 22GHz 1' Measured Radiation Pattern of Second Embodiment: H-plane vs ETSI and FCC specs

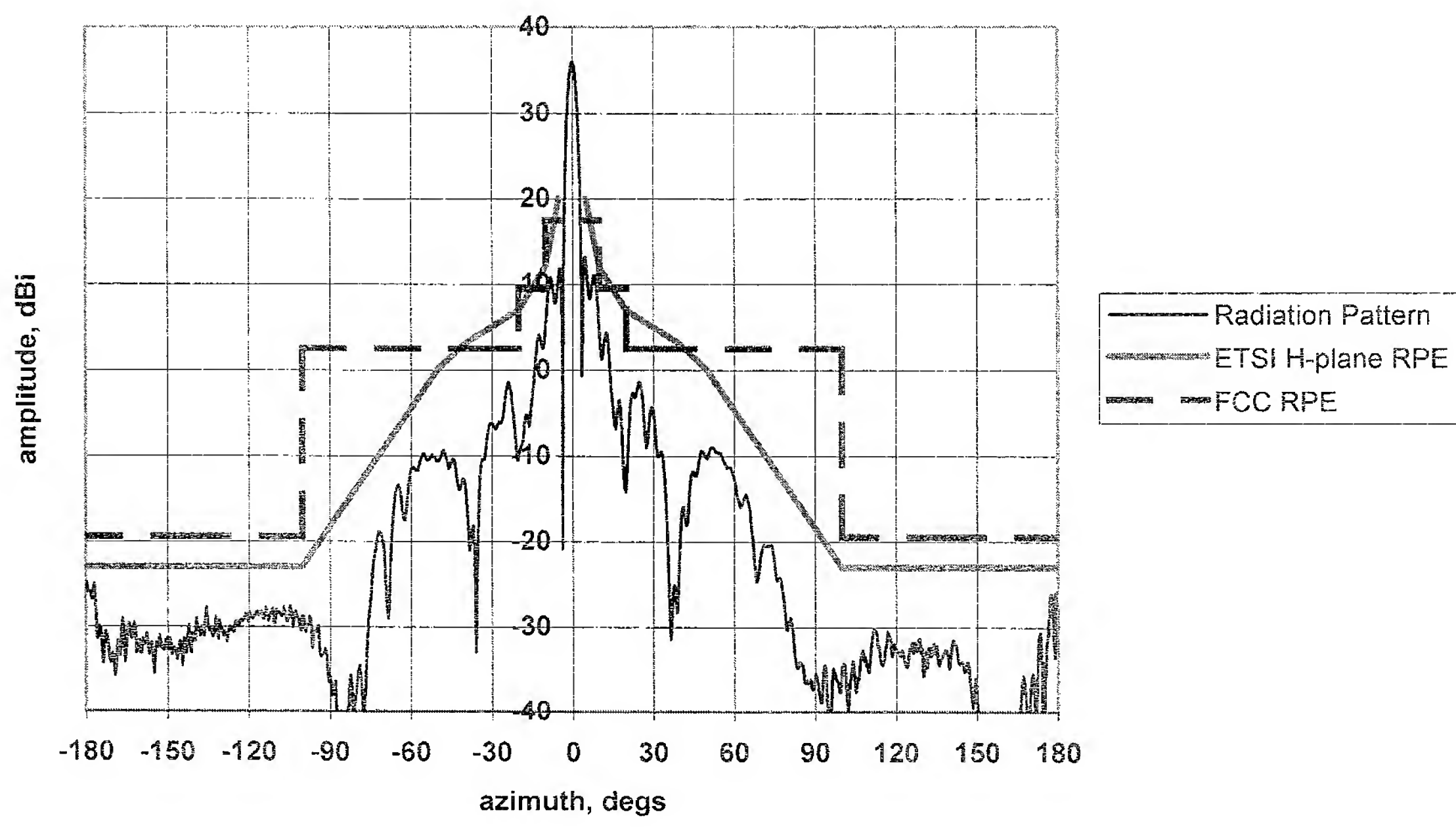


Figure 10a: 3rd Embodiment ( $F/D < 0.2$ ) typ.

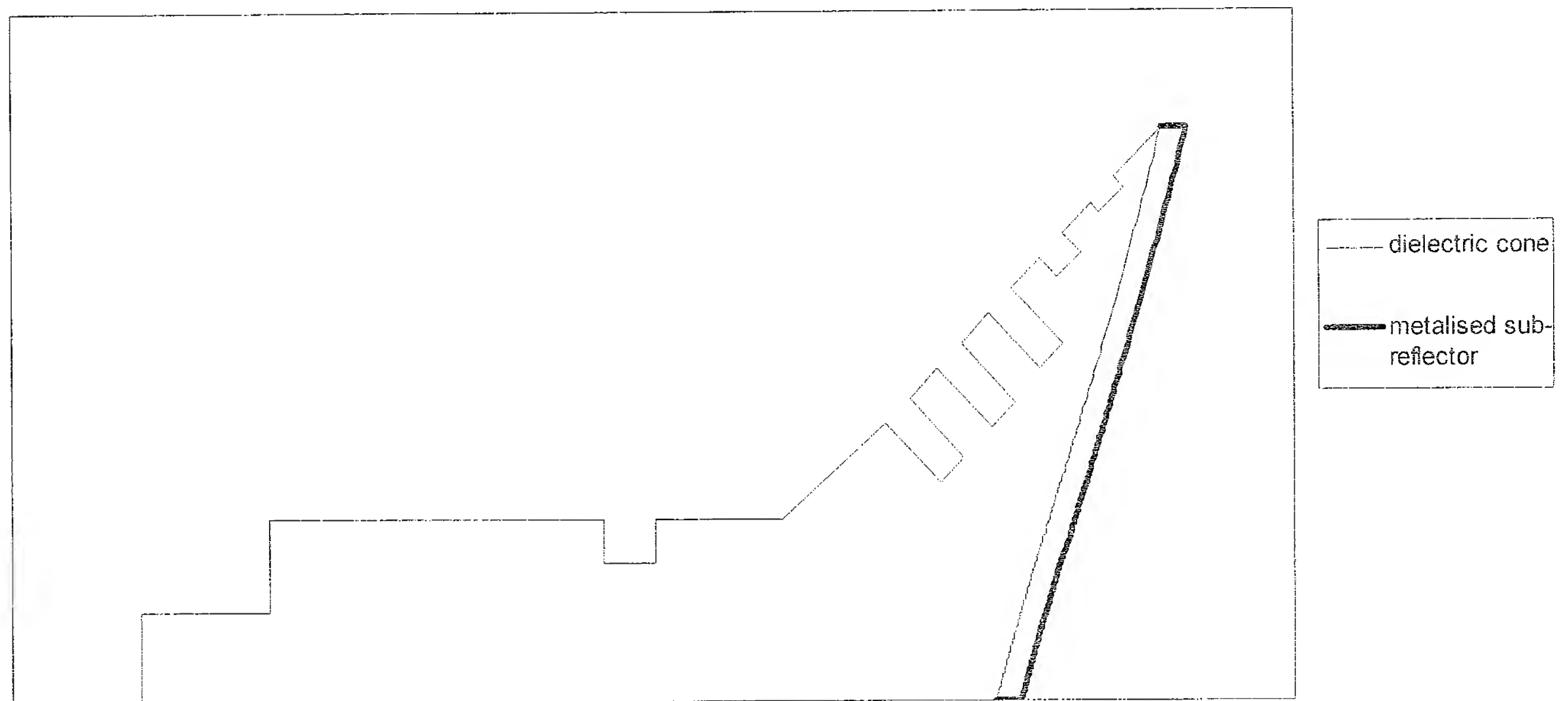


Figure 10b: Etheta and EPhi Amplitude Radiation Patterns

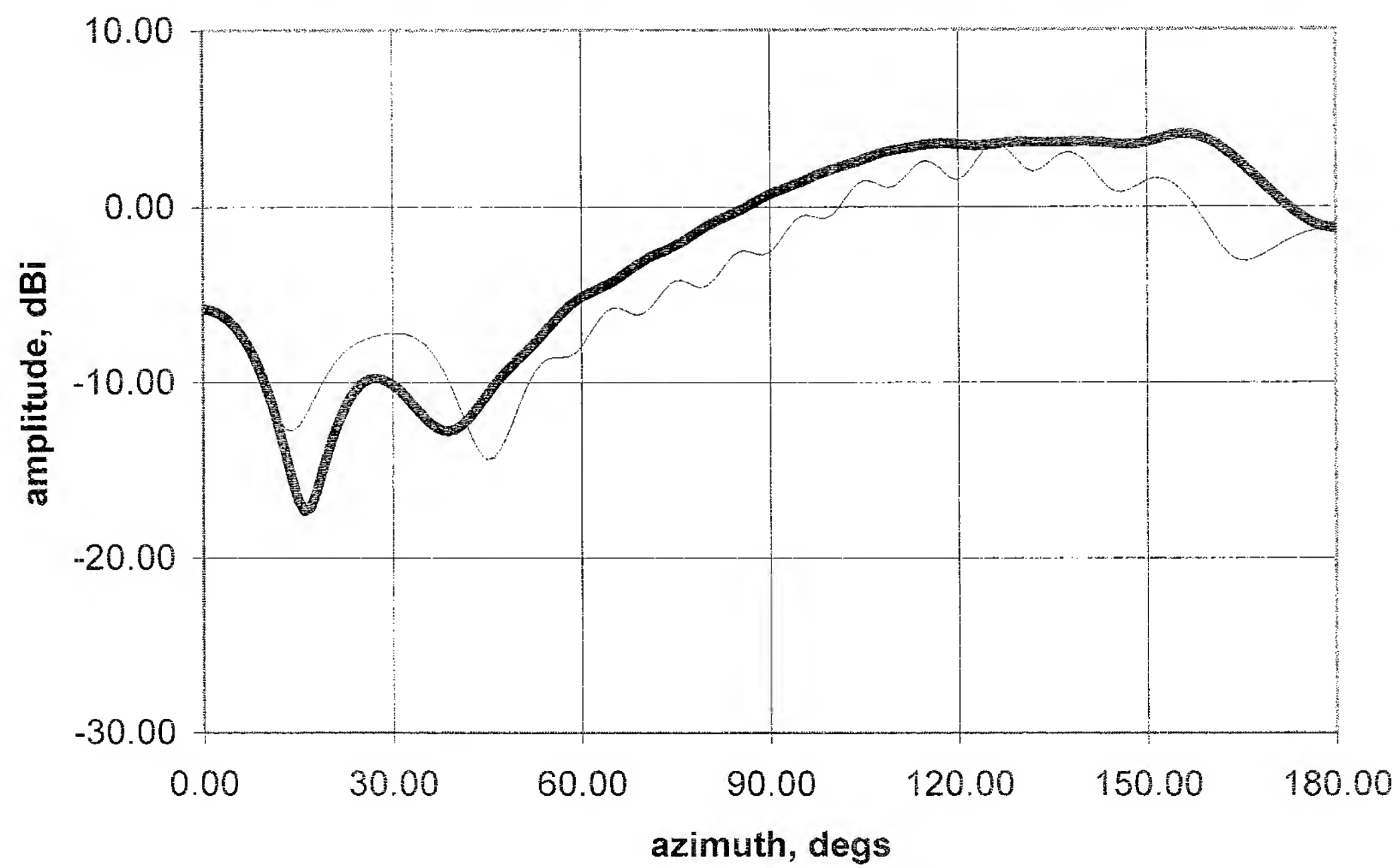


Figure 10c:Etheta and Ephi Phase Patterns (F/D<0.2 typ)

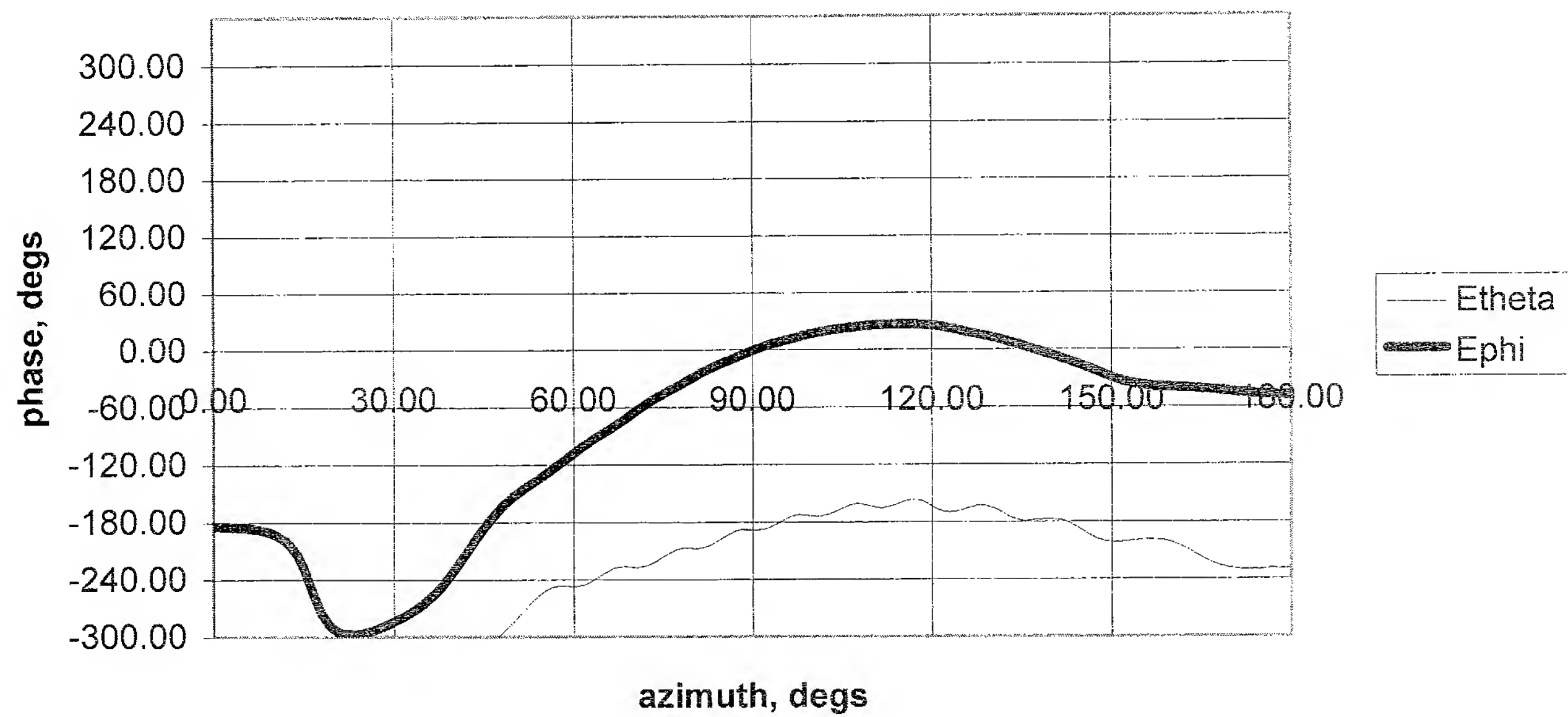


Figure 11a: 4th Embodiment (F/D<0.2) typ.

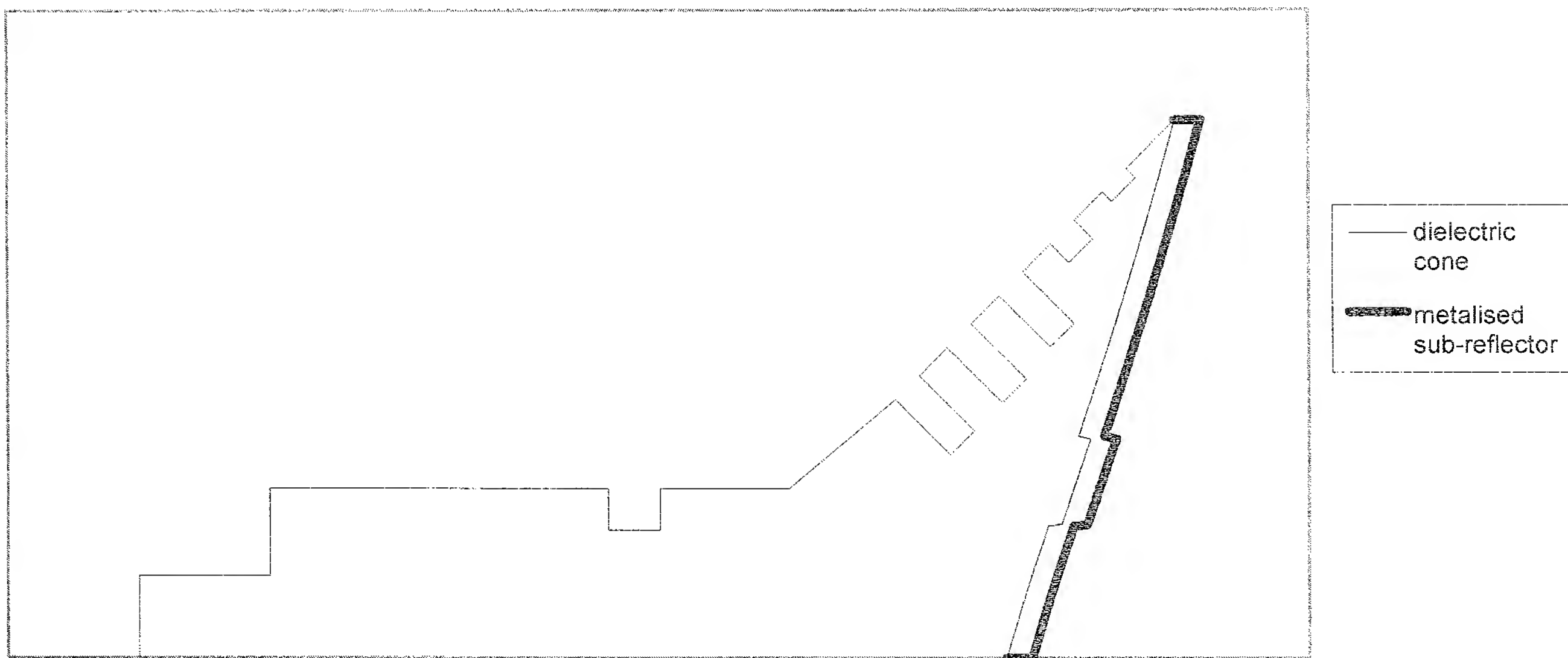


Figure 11b: Etheta and EPhi Amplitude Radiation Patterns

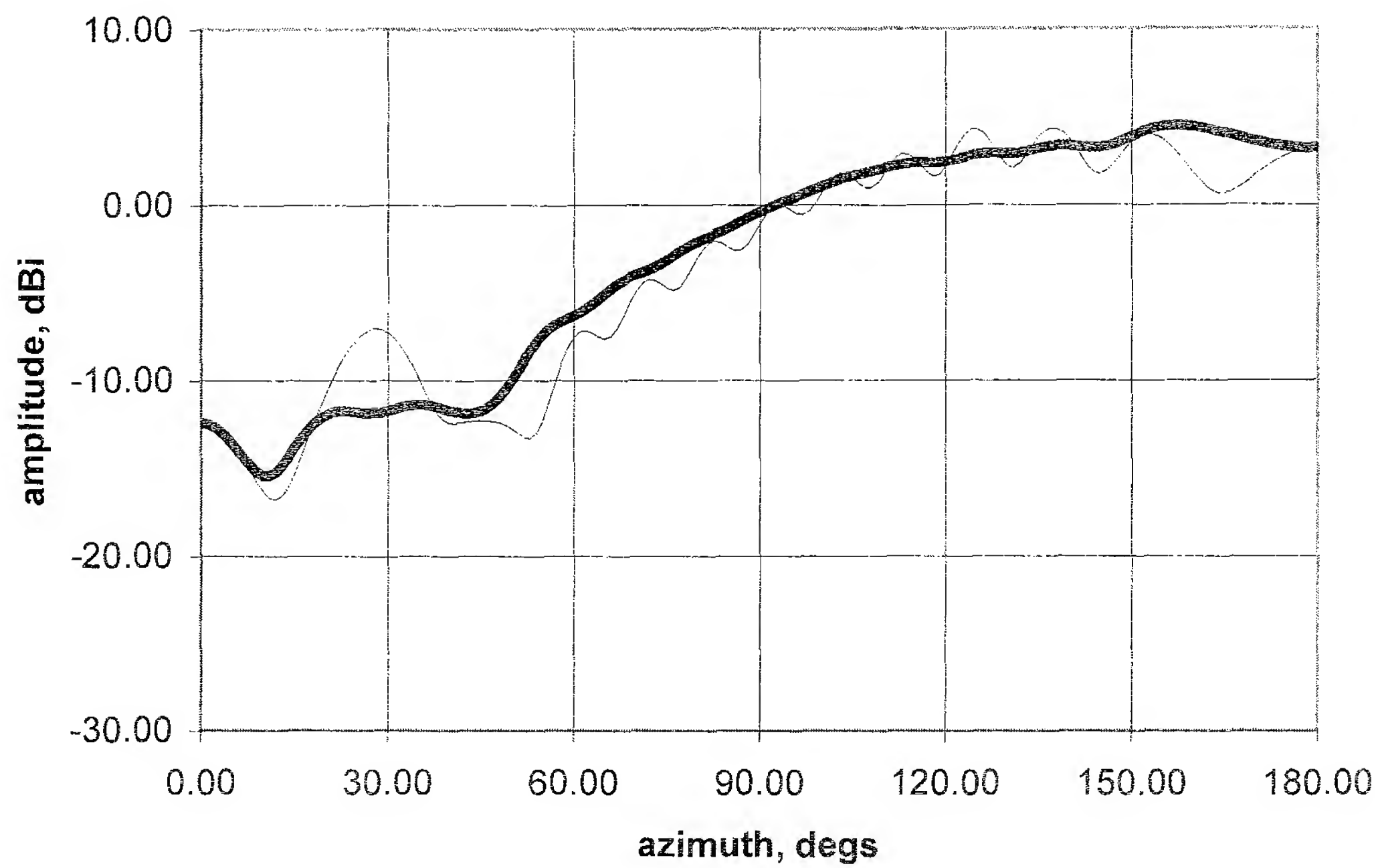


Figure 11c: Etheta and EPhi Phase Patterns

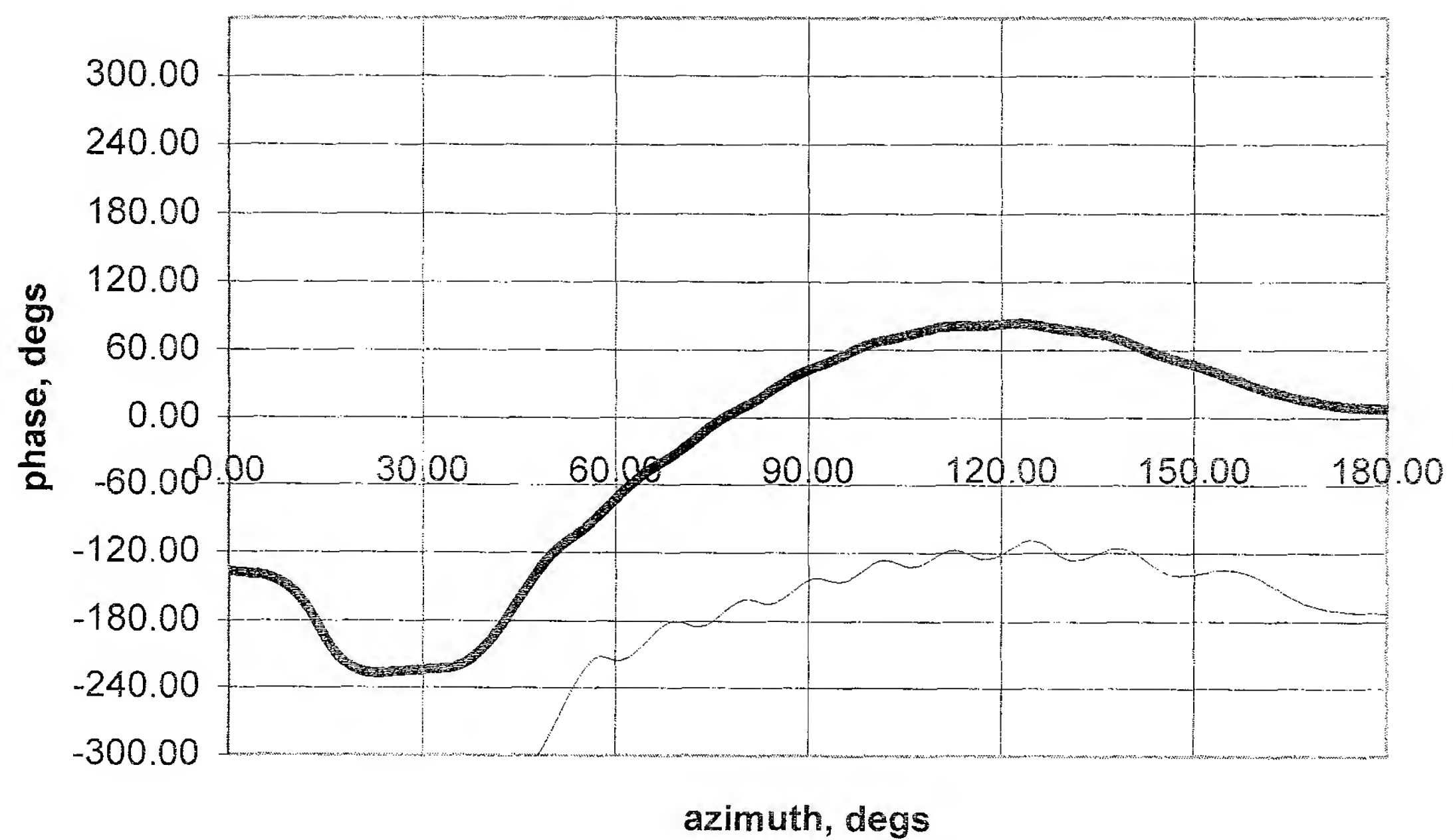


Figure 12a: 5th Embodiment ( $F/D < 0.2$ ) typ.

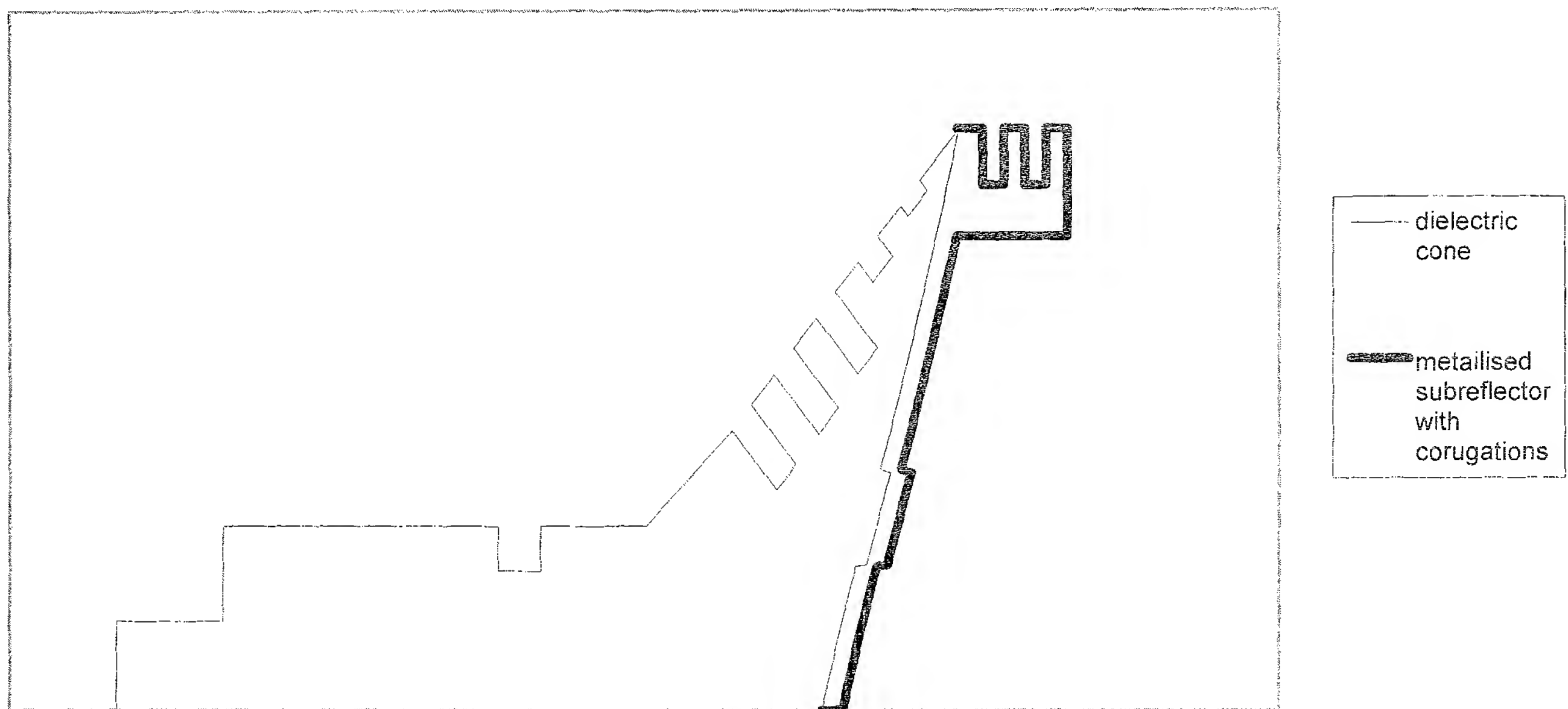


Figure 12b: Etheta and EPhi Amplitude Radiation Patterns

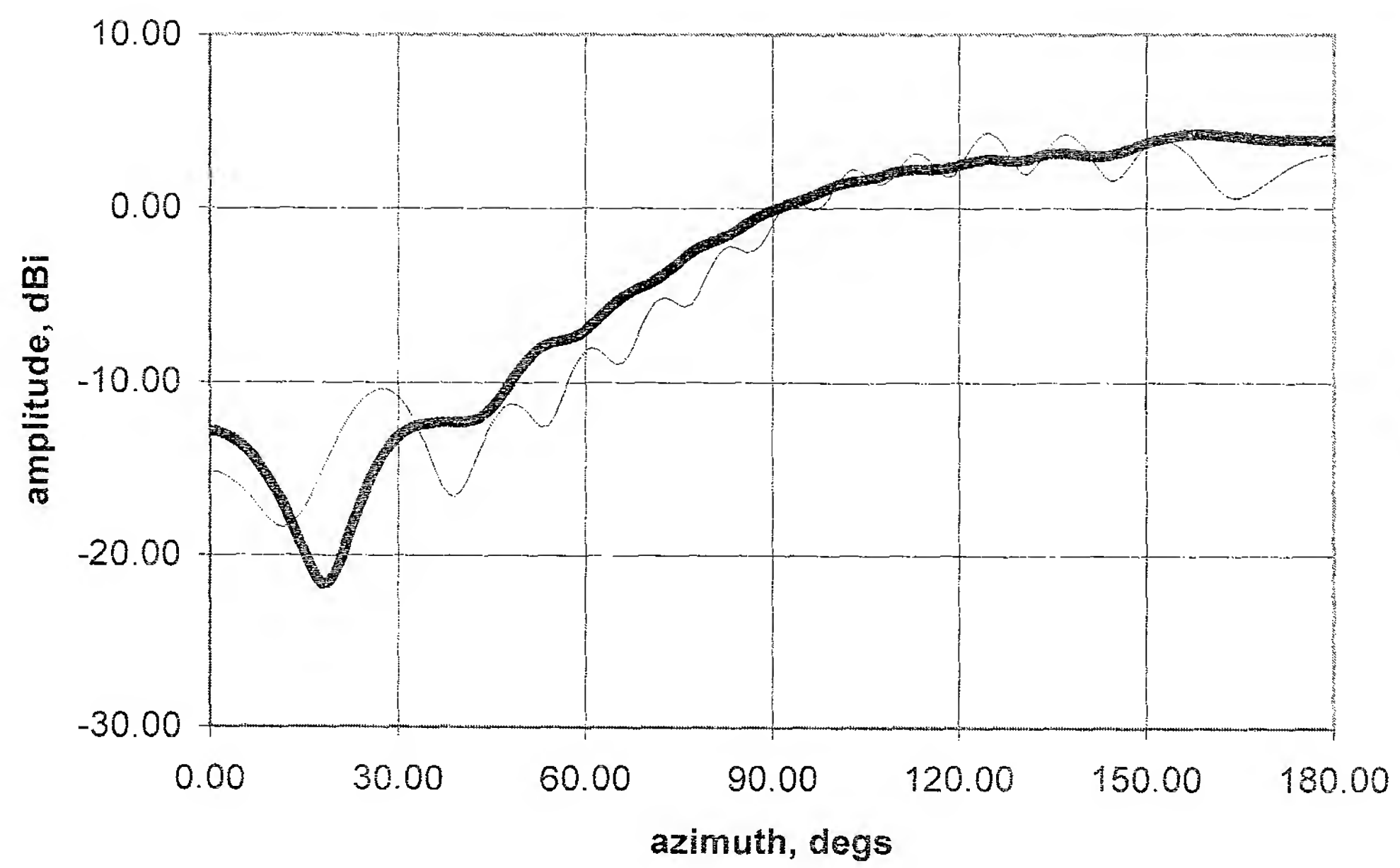


Figure 12c: Etheta and Ephi Phase Patterns

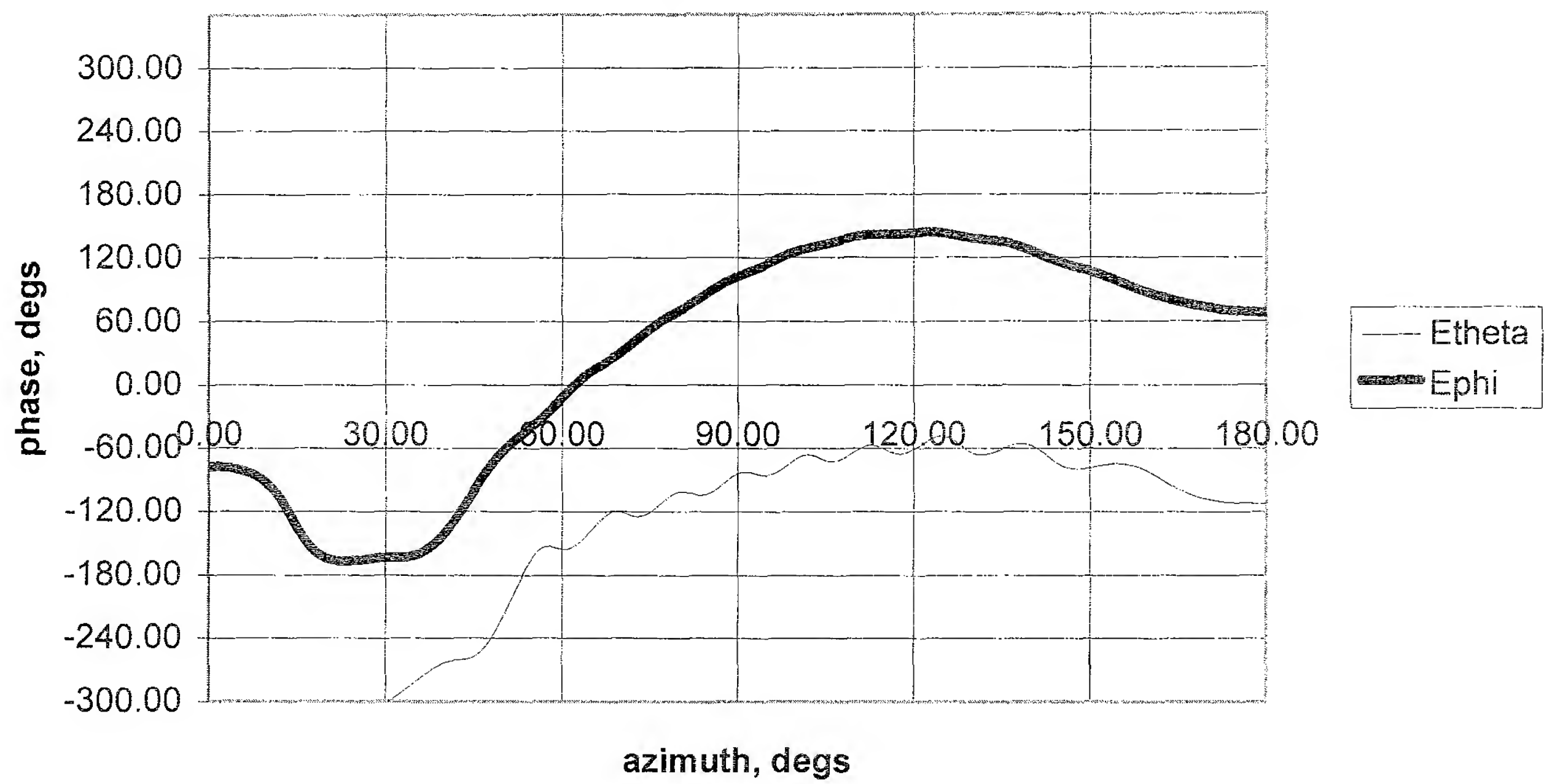


Figure 13a: 6th Embodiment (F/D<0.2) typ.

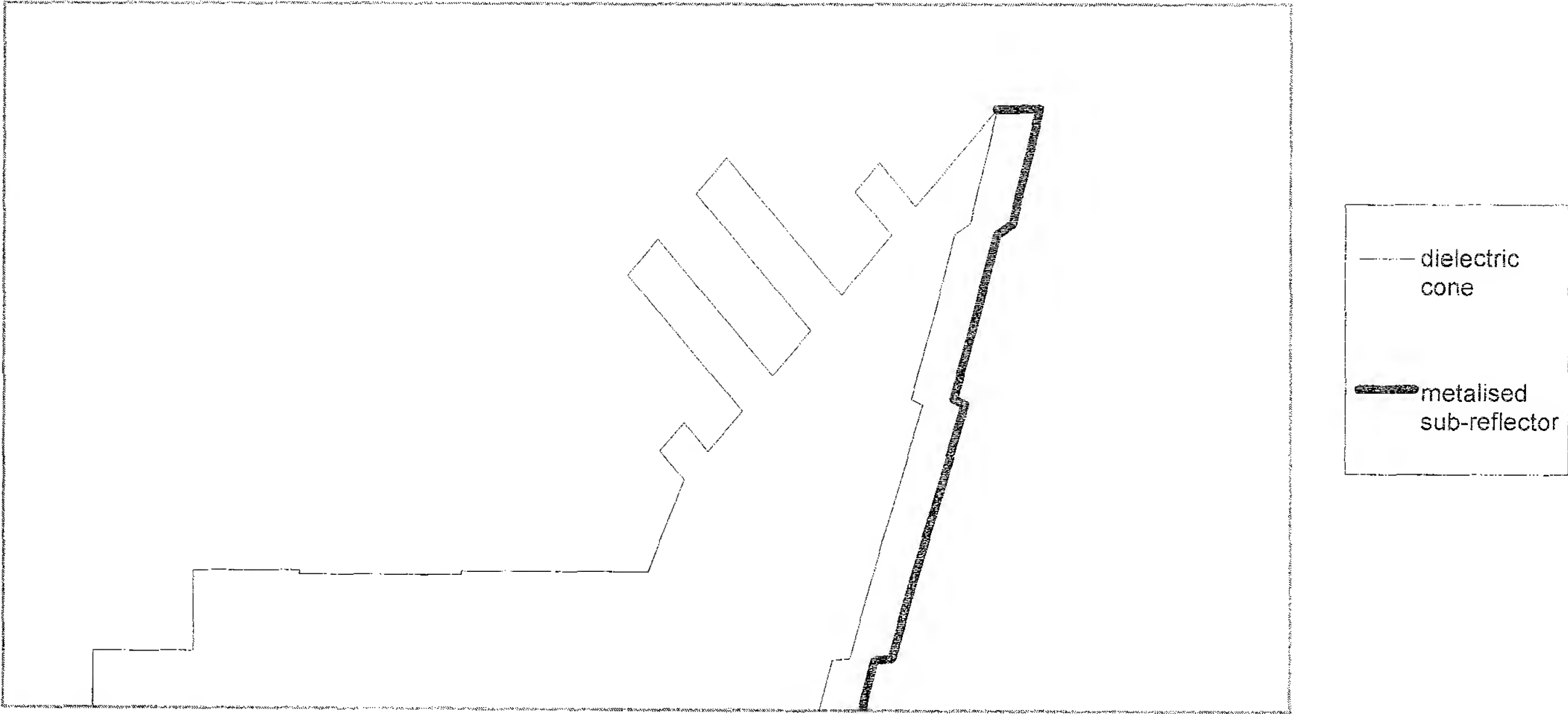




Figure 13b: Etheta and EPhi Amplitude Radiation Patterns

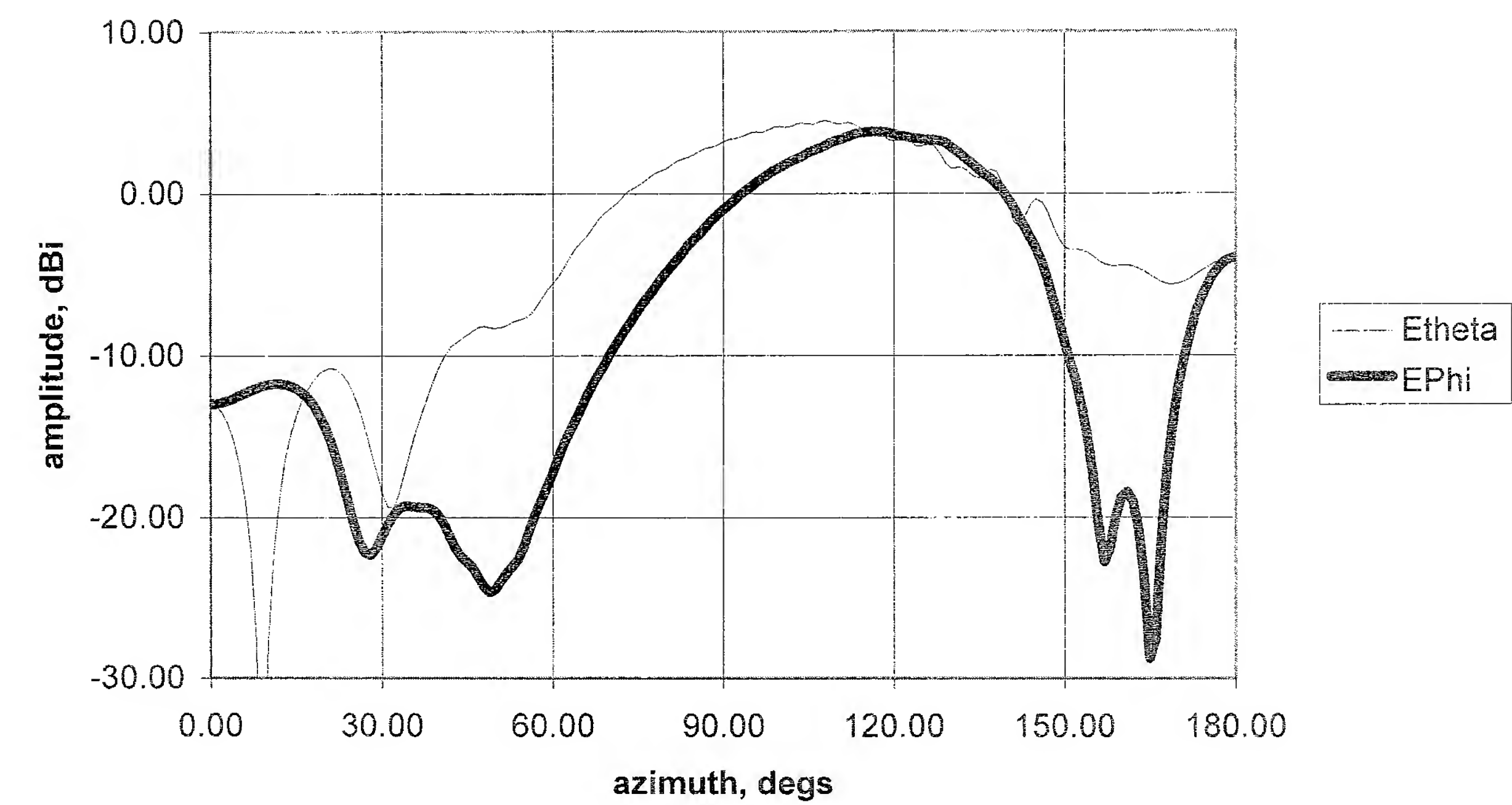


Figure 13c: Etheta and Ephi Phase Patterns

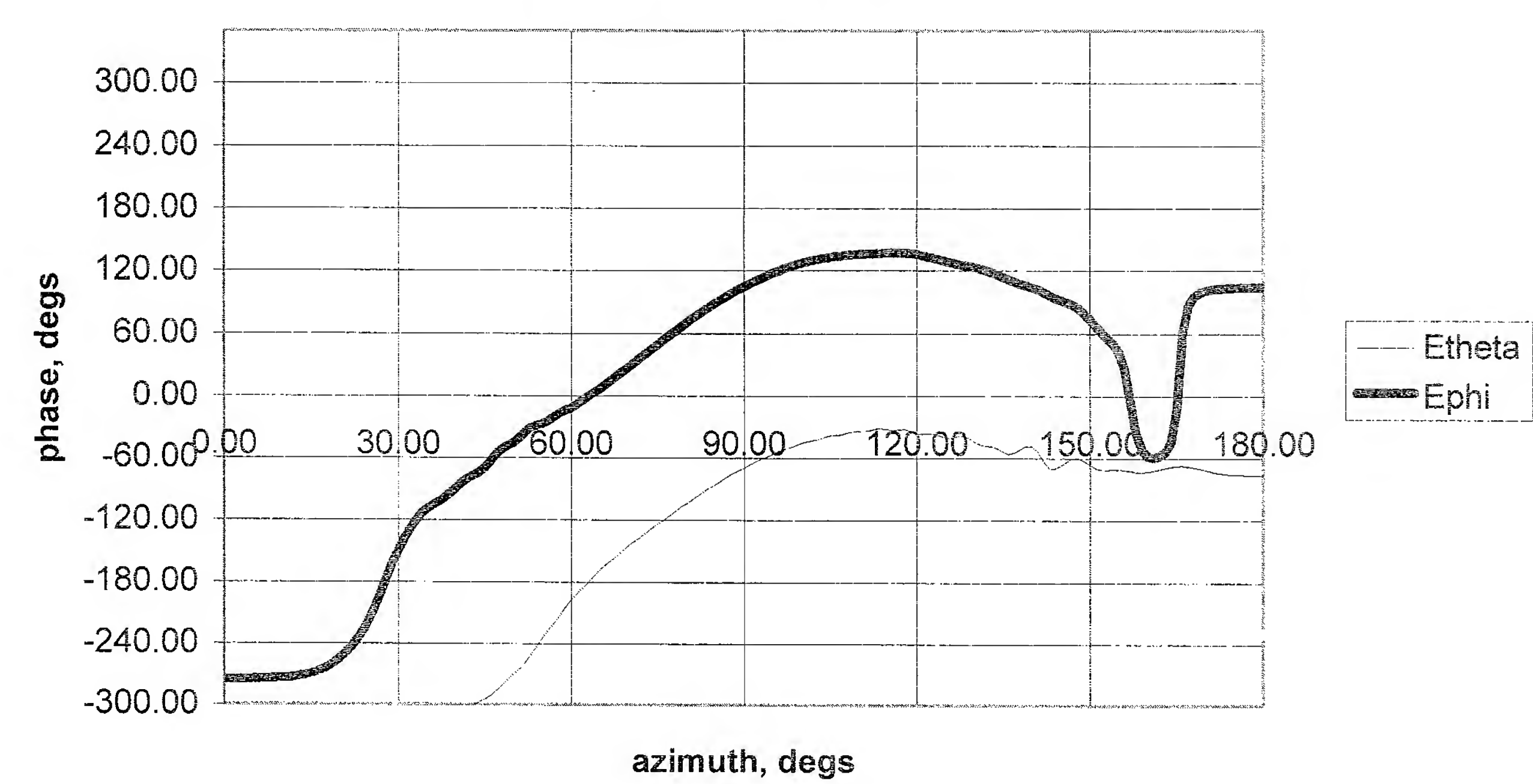




Figure 13d: 38GHz 1' Measured Radiation Patterns of Sixth Embodiment: E-plane vs ETSI and FCC specs

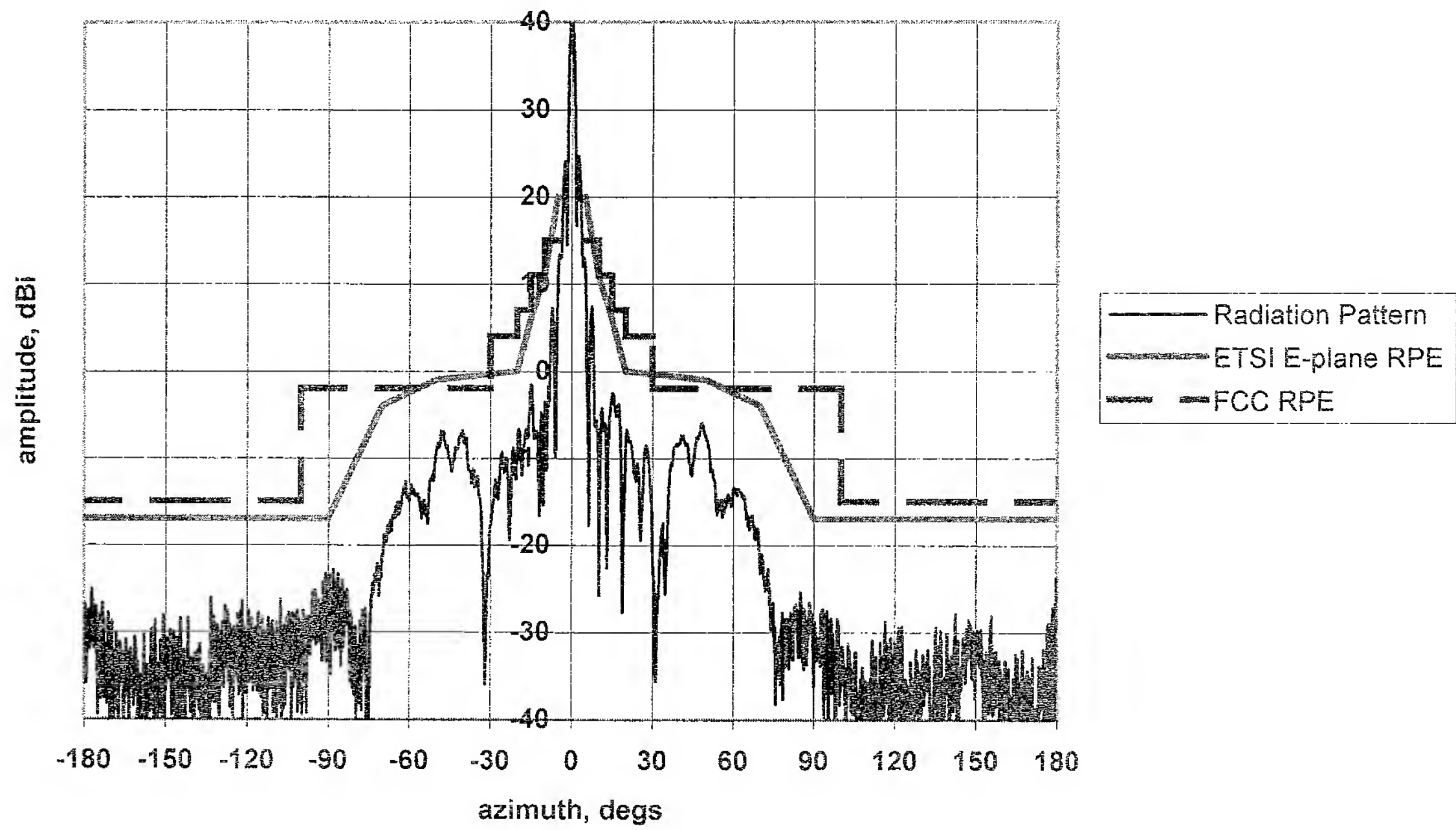


Figure 13e: 38GHz 1' Measured Radiation Patterns of Sixth Embodiment: H-plane vs ETSI and FCC specs

